



FRIDAY, DECEMBER 15.

## Contributions.

## English Fast Trains.

TO THE EDITOR OF THE RAILROAD GAZETTE:

In your issue of 17th Nov. you publish a table of speeds of fast trains in Europe and America from a German Journal, *Die Verkehrszeitung*.

The table is hardly fair to us Britishers, as our best train times are omitted, and several very lazy-running trains, such as the Plymouth and Portsmouth expresses (37 and 36 miles an hour respectively), are quoted. Our two fast trains are: I. The "Flying Dutchman" (Great Western broad gauge), which does the run from London to Swindon, 77½ miles, in 1 hour 27 minutes, being over 51 miles an hour; II. The "Flying Scotchman," or East Coast Express (Great Northern, Northeastern and North British companies), from London (King's Cross) to Edinburgh, 395 miles, in 9 hours exactly, being a fraction under 44 miles an hour. It is fair to add that this train allows 20 minutes for luncheon at York, which is included in the 9 hours.

The time of this train to York, 188½ miles, is 3 hours 55 minutes, being over 47 miles an hour.

The fact that train speeds are a subject of interest to many must be my excuse for troubling you with these details.

CHARLES J. ANDERSON.

CHISWICK, Middlesex.

TO THE EDITOR OF THE RAILROAD GAZETTE:

In your issue of Nov. 17 is a reproduction of an article that recently appeared in the German *Verkehrszeitung* on speeds on European railways. As regards the speeds in Germany I am not competent to offer an opinion, but those quoted as referring to this country are far under the mark, and from the routes given seem to refer to minor companies—not one of the "crack" routes being mentioned. The fastest long journey train in England is the Great Northern express, known generally as the "Flying Scotchman," which leaves King's Cross, London, every day at 10 a. m., and arrives at Edinburgh at 7 p. m., 404 miles in 7 hours, or say 47 miles an hour, but half an hour is allowed at York to dine so that the actual speed is very much higher.

[This correspondent must have meant to write nine hours for this run, which, however, is not 47 miles an hour for 404 miles, but 45 miles. It will be noticed that Mr. Anderson's letter gives the distance run by this train as 395 miles, instead of 404, and the stop at York as 20 minutes, instead of half an hour.—EDITOR.]

The same railway has several trains between London and Bradford (rather under 200 miles) that make an average of 53½ miles.

The Great Western broad-gauge expresses exceed that speed as between London and Swindon, 70 miles, but afterwards decrease the average.

The "Wild Irishman," on the Northwestern, averages about 44 miles from London to Holyhead (280 miles), and the London and Liverpool expresses of the same company, as you remark, make more than 40 miles.

The Brighton Pullman express makes the 50 miles in 1¼ hours.

None of these trains are mentioned in the German list. There may be others, but these are within the knowledge of any traveling Londoner as every day experiences for years past; so that I fear the German list is not quite as correct as you fancy.

J. G. D.

LONDON, Nov. 29, 1882.

## The Chicago, Burlington &amp; Quincy Standard Truck.

Chicago, Burlington & Quincy Railroad Company,  
Office Superintendent Motive Power,  
AURORA, Ill., Nov. 21, 1882.

TO THE EDITOR OF THE RAILROAD GAZETTE:

In the *Railroad Gazette* of Nov. 3 we note a report from the Master Car-Builders' Committee on standard trucks, in which the old trucks of the Chicago, Burlington & Quincy

of deflection, as shown by dotted lines, is very slight throughout.

Will you kindly correct this error about Chicago, Burlington & Quincy standards? GODFREY W. RHODES,  
Superintendent of Motive Power.

## Joint Executive Committee—Passenger Department.

At a meeting of a sub-committee of the Joint Executive Committee, Tuesday, Nov. 21, at which were present the general passenger agents of the roads possessing lines and parts of lines between Cincinnati and New York, as also of the Ohio & Mississippi, the Cleveland, Columbus, Cincinnati & Indianapolis, the Lake Erie & Western and the Chesapeake & Ohio, it was agreed that the Chesapeake & Ohio should be allowed a differential rate from St. Louis and Cincinnati to Washington, Baltimore, Philadelphia and New York, and also from Louisville and Nashville to New York, and in the other direction also. The rate is generally equal to the lowest differential rate by any other route. From Cincinnati to New York it is \$16 first-class, \$15 second-class, and \$13.80 theatricals; to Washington and Baltimore it is \$12.50, \$11.25 and \$10.60 respectively. For some time it is said that the Chesapeake & Ohio has secured, by making low rates, a very respectable share of the travel, especially from Cincinnati to Washington and Baltimore.

It was agreed that as soon as the Chesapeake & Ohio should put on continuous train tickets from Washington to Chicago via Cincinnati, the Baltimore & Ohio and the Pennsylvania should withdraw their tickets from Washington to Chicago via Cincinnati.

At a meeting of the Joint Executive Committee at No. 346 Broadway, Nov. 22 to 25, the following roads were represented:

Baltimore & Ohio, C. K. Lord; Boston & Albany, E. Gallup; Canada Southern, W. H. Hurlbert; Chesapeake & Ohio, H. W. Fuller; Cleveland, Columbus, Cincinnati & Indianapolis, A. J. Smith; Grand Rapids & Indiana, A. B. Leet; Indianapolis & St. Louis, A. J. Smith; Indiana, Bloomington & Western, H. M. Brouson; Lake Erie & Western, G. W. Smith; Lake Shore & Michigan Southern, W. P. Johnson; Louisville, Evansville & St. Louis, J. S. Clark; Marietta & Cincinnati, T. P. Barry; Michigan Central, H. B. Ledyard; O. W. Ruggles; New York Central & Hudson River, H. J. Hayden, C. B. Meeker; New York, Lake Erie & Western, Jno. N. Abbott; New York & New England, A. C. Kendall; New York, Pennsylvania & Ohio, J. M. Ferris, A. E. Clark; Ohio & Mississippi, W. B. Shattuck; Pennsylvania, Frank Thomson, J. R. Wood; Pennsylvania Company, Pittsburgh, Cincinnati & St. Louis, Vandavia Line, E. A. Ford; Wabash, St. Louis & Pacific, H. C. Townsend.

The Chairman said that the meeting had been called, under a resolution adopted at the last meeting, for the purpose of adjusting differential fares between intermediate points, and the completion of the contract for division of earnings, and that the Committee would now proceed with this matter unless it was desired to first dispose of some routine business.

It was suggested that the miscellaneous business before the Committee should be first taken up, and the adjustment of differential fares postponed.

## WITHDRAWAL OF COMMISSIONS PAID IN SAN FRANCISCO TO OUTSIDE PARTIES.

On motion, the Chairman appointed a committee composed of the general passenger agents of the trunk lines, and Messrs. Townsend, Ruggles and Ford to draw up an agreement having in view the withdrawal of commissions now paid in San Francisco to outside parties, which have the effect to reduce the regular fares.

In accordance therewith, the committee reported as follows:

"Resolved, That from Dec. 1 proximo, no commissions shall be paid in San Francisco, or on the Pacific coast, that shall have the effect of reducing the established fares of the Central Pacific Railroad to points east of the Missouri River, and no orders for eastbound tickets of any class shall be drawn on lines east of the Missouri River.

"The above resolution is recommended for adoption by the Joint Executive Committee, and the Western connecting lines are respectfully requested to join in this desirable reform."

The report of the committee was received, but as it was evident that no agreement could be reached, the Chairman recommended that the matter be referred to the Trunk Line Committee for further consideration, which recommendation was adopted.

## APPOINTMENT OF LOCAL COMMITTEES.

On motion, the following appointments were made:

For Cincinnati—W. B. Shattuck, Chairman; T. P. Barry, Secretary.

For St. Louis—H. C. Townsend, Chairman; G. D. Bacon, Secretary.

For Louisville—C. P. Atmore, Chairman; J. C. Ernst, Secretary.

The appointment of Mr. Thomas C. Moore as Chairman of the Chicago Committee, was confirmed, and the selection of a Secretary for that Committee postponed.

## INCREASE OF EMIGRANT OR THIRD-CLASS FARES FROM THE PACIFIC COAST.

After discussion, it was

"Resolved, That the Chairman of the Joint Executive

the Western Association in time to incorporate the changes adopted in their rate sheets, taking effect Jan. 1, 1883."

The Chairman issued notice as above agreed.

## CHARGE AGAINST THE INDIANA, BLOOMINGTON &amp; WESTERN OF PAYING COMMISSIONS IN ST. LOUIS CONTRARY TO AGREEMENT.

A lengthy discussion of this subject resulted in the agreement of Mr. H. M. Bronson, General Passenger Agent Indiana, Bloomington & Western Railroad to discontinue the payment of commissions at that point, and the assurance of Mr. H. C. Townsend, General Passenger Agent, Wabash, St. Louis & Pacific Railway, upon whose issue the commission was said to have been paid, that if the payment of such commission was continued, he would withdraw the tickets reading over the Indiana, Bloomington & Western from sale, according to agreement.

## DIFFERENTIAL FARES BETWEEN INTERMEDIATE POINTS.

The advisability of establishing differential fares between intermediate points was argued at length without coming to any definite conclusions.

## ACCEPTANCE OF DIFFERENTIAL FARES BY CHESAPEAKE &amp; OHIO.

Mr. H. W. Fuller, General Passenger Agent, Chesapeake & Ohio Railroad, reported that his company had decided to accept the award of differential fares from Cincinnati, Louisville, Nashville and St. Louis, as stated in the proceedings of meeting of Nov. 21, to take effect from Dec. 1.

## THE LOUISVILLE, EVANSVILLE AND ST. LOUIS ACCEPTS DIFFERENTIAL FARES AND CONTINUOUS TRAIN TICKETS.

Mr. J. S. Clark, General Ticket Agent, Louisville, Evansville & St. Louis Railroad Company, reported that he was authorized to say that his company would accept the conditions of the resolutions adopted at a previous meeting of this Committee, under which continuous-train passage tickets are to be sold between differential-fare points, and that he would place such tickets on sale from St. Louis, the only differential-fare point in which his line was interested, and that no through tickets should be sold by the evening train, which made no direct connection at Louisville with the Chesapeake & Ohio Railway.

## READJUSTMENT OF DIFFERENTIAL FARES AND DIVISION OF BUSINESS BETWEEN DIFFERENTIAL FARE POINTS.

It was agreed that the statistics showing the results of the operation of the differential fares already established, as compared with the business transacted between the same points for previous periods, during the year 1881 and the present year, should be given to the Committee for their information and guidance in determining their action with regard to the readjustment of such fares.

These statistics were laid before the meeting, and were examined during the 23d and 24th days of November.

The question was then discussed as to whether it would not be desirable to make a definite division of the traffic between differential-fare points, between the competing roads, and monthly cash settlements of accruing balances, so as to insure to each road the full amount of the business upon the basis of 1881, as provided in the agreement for the division of gross passenger earnings. It was considered whether the division of the earnings could not thus be confined to the competitive traffic, instead of including local traffic, as contemplated in the contract.

As the representatives of companies present were not authorized to act upon this question, the following resolution was unanimously adopted:

"Whereas, It has been ascertained from the statistics presented at this meeting that the present differential fares will have to be modified in order to bring about a proper distribution of the business, as originally agreed upon,

"Resolved, That when this meeting adjourns it adjourn until Tuesday, Dec. 5, 1882, at which time the modification of said differential fares shall be proceeded with, and that, in the meanwhile, the general passenger agents shall confer with their chief executive officers upon the proposed plan of dividing the passenger traffic between competitive points, and making monthly money settlements of balances, and that the general passenger agents be prepared and authorized to act definitely upon this subject at said meeting."

## THE LAKE ERIE &amp; WESTERN ON DISCONTINUING THE SALE OF THROUGH TICKETS TO FREMONT AND SANDUSKY, O.

Mr. G. W. Smith presented the following resolution:

"Resolved, That the trunk lines be requested to place on sale the tickets to Sandusky and Fremont, which were recently withdrawn from sale, and that first-class limited and second-class rates be made to those points on the same basis per mile as to Cleveland and Toledo."

After discussion, several members of the Committee expressing themselves as unable to act in the matter, as they did not fully understand the subject, the resolution was not adopted.

## DIFFERENTIAL FARES BETWEEN DIFFERENTIAL FARE POINTS AND INTERMEDIATE POINTS.

Mr. Bronson offered the following resolution:

"Resolved, That Section 1, of the proceedings of this Committee, at meeting of Aug. 22 to 26, 1882, be changed to read that commissions may be paid from differential fare points to intermediate points, until differential fares are established between those points."

This resolution was discussed, but, it being shown that if the same was adopted, it would lead to a general demoralization of the established fares, Mr. Bronson was urged to allow the matter to lie over until the next meeting, when differential fares to intermediate points could be established.

In connection with this, the claim made by the Lake Erie & Western Railroad, which road desired that differential fares be established between St. Louis and certain points named by its representative, was discussed, and in view of the difficulty of taking separate action in the case of these two roads, their representatives agreed to let the matter lie over until the next meeting.

The following resolution was then unanimously adopted:

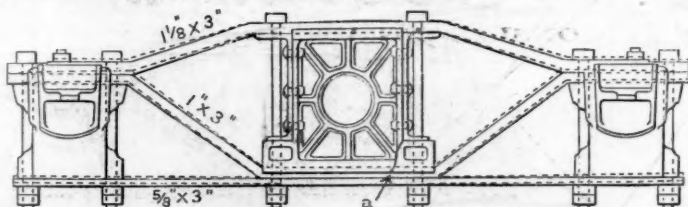
"Resolved, That this Committee shall adjourn until Tuesday, Dec. 5, 1882, and that the first business to be taken up at that meeting shall be the consideration of differential fares to intermediate points, to be allowed the Indiana, Bloomington & Western and the Lake Erie & Western railroads."

The meeting then adjourned to Tuesday, Dec. 5, 1882.  
R. T. BRYDON, Secretary. ALBERT FINK, Chairman.

## The Kinzua Viaduct.

The engravings published last week represented the location and the general plan of this remarkable structure. This week we give illustrations showing the details of the towers, and the method of erection.

The columns composing the towers were built in 30-ft. sections at the works at Phoenixville, Pa., and transported in cars by rail directly to the site of the structure. When placed in position these sections were connected together by wrought-iron sleeve joints placed inside the columns and



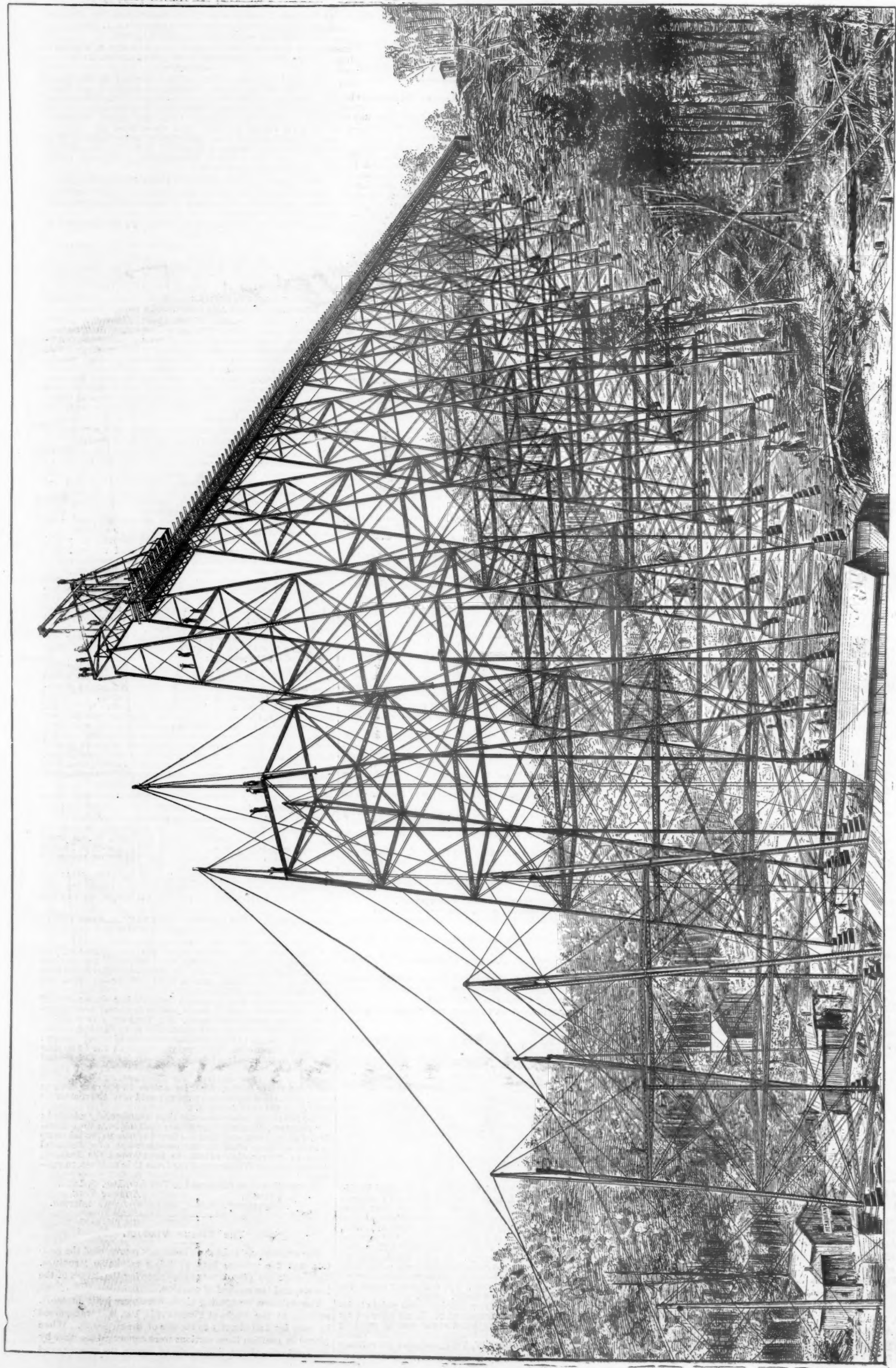
Railroad have a pretty good representation. We also note it stated that fig. 1 in the above report is the freight truck now being built by the above company.

This is incorrect. We send you a blue print of the company's standard truck as proposed in December, 1880, and afterwards adopted. The top bar you will note is 3 x 1½ in., and the second bar 3 x 1 in. Two tests were made in December, 1880, under the same conditions as those referred to in the Master Car-Builders' report: each showed a pressure of 67½ tons before the bars buckled. To verify this report, Nov. 16, 1882, we made a similar test with the standard truck. At 65 tons the truck-end casting cracked, as per red line on enclosed blue print No. 258. This confirming the original report we made no further examination. The line

Committee is hereby directed to notify the Central Pacific Railroad Company and Southern Pacific Railroad Company and Oregon Railway & Navigation Company that from Jan. 1, 1883, the rate on emigrant, or third or second class tickets from points on their lines to Atlantic seaboard cities, must be so advanced as to pay the lines east of Chicago and St. Louis the highest second-class (and not lower differential) rate proportion on all such tickets. In other words, that the emigrant, or third or second-class rates between points indicated eastbound must be based on the highest second-class rates from Chicago or St. Louis, by whichever route the through rate may properly be made. Also,

"Resolved, That the rates from Pacific coast points to intermediate points east of Chicago and St. Louis affected by the above advance, shall be adjusted at the special meeting of the Western Association of General Passenger and Ticket Agents at Indianapolis, Dec. 12, 1882, and that the railway companies heretofore named, be notified by the Secretary of



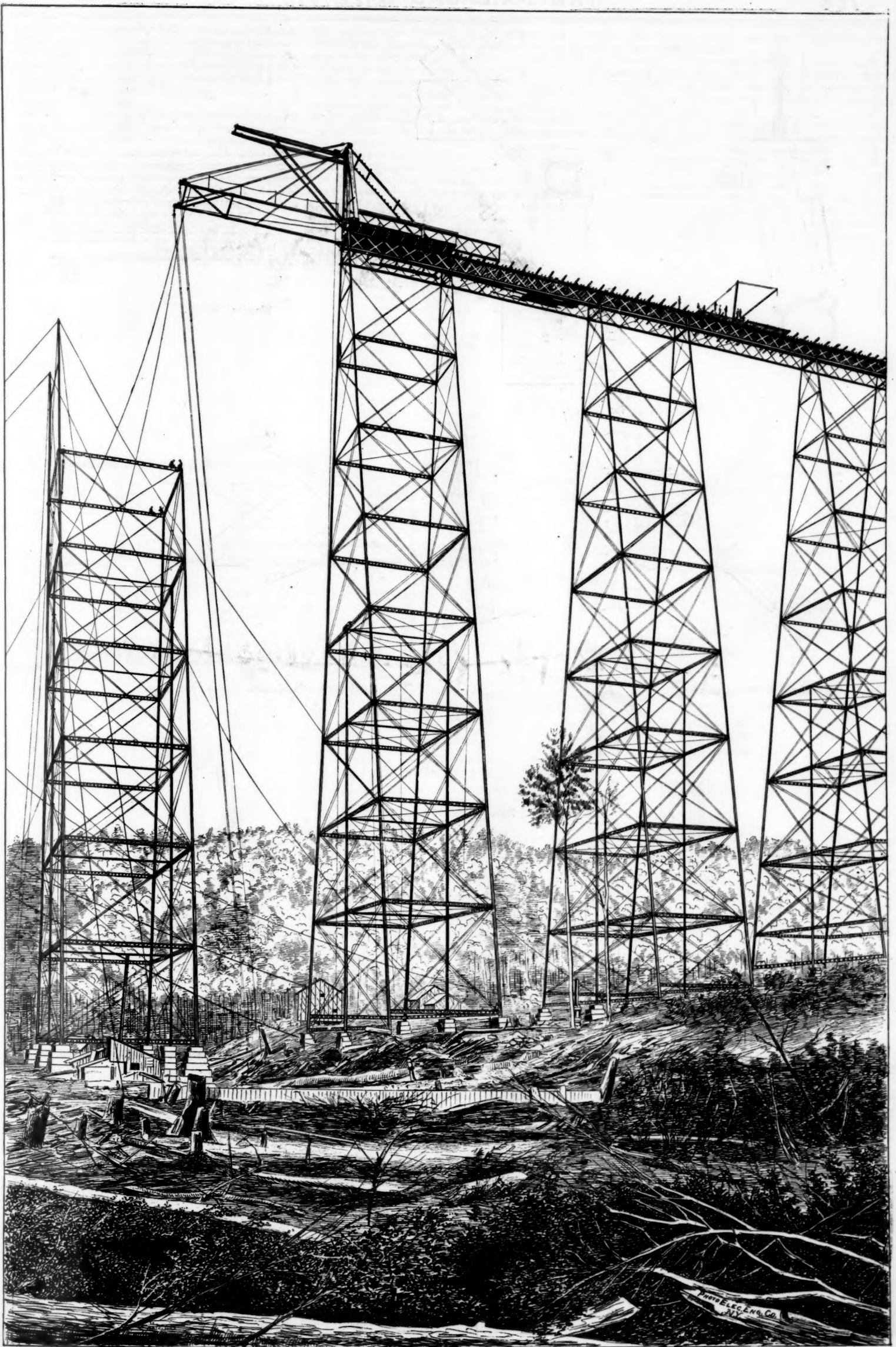


KINZUA VIADUCT, NEW YORK, LAKE ERIE & WESTERN COAL & RAILROAD CO.,

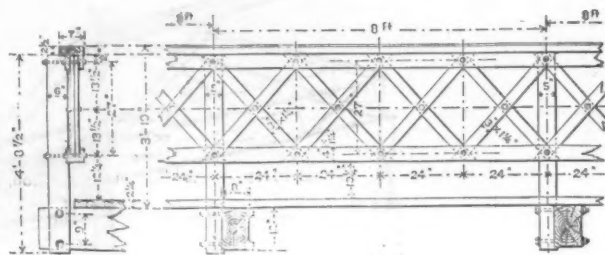
*In Progress of Erection, July 23, 1880.—Swinging Girder over Tower.*

CLARK, REEVES & Co., Designers and Contractors, Phoenixville (Pa.) Bridge Works.



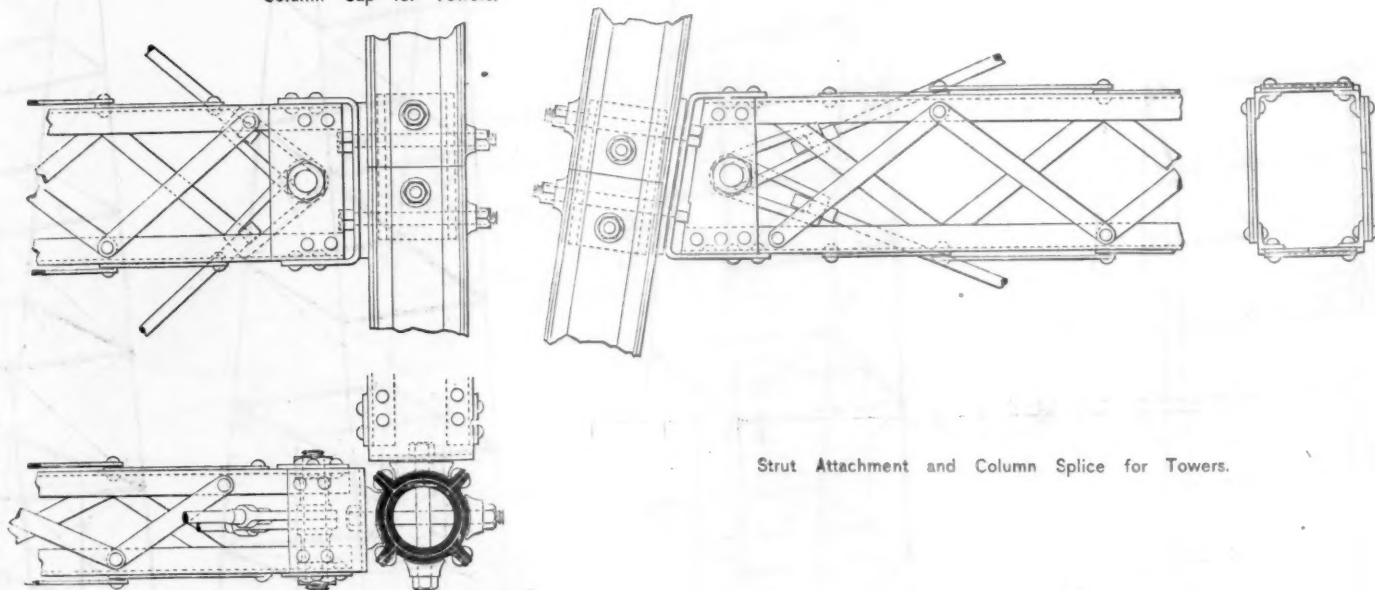


KINZUA VIADUCT, NEW YORK, LAKE ERIE & WESTERN COAL & RAILROAD CO.  
*In Progress of Erection, July 22, 1882.* CLARKE, REEVES & Co., Designers and Contractors, Phoenixville (Pa.) Bridge Works.

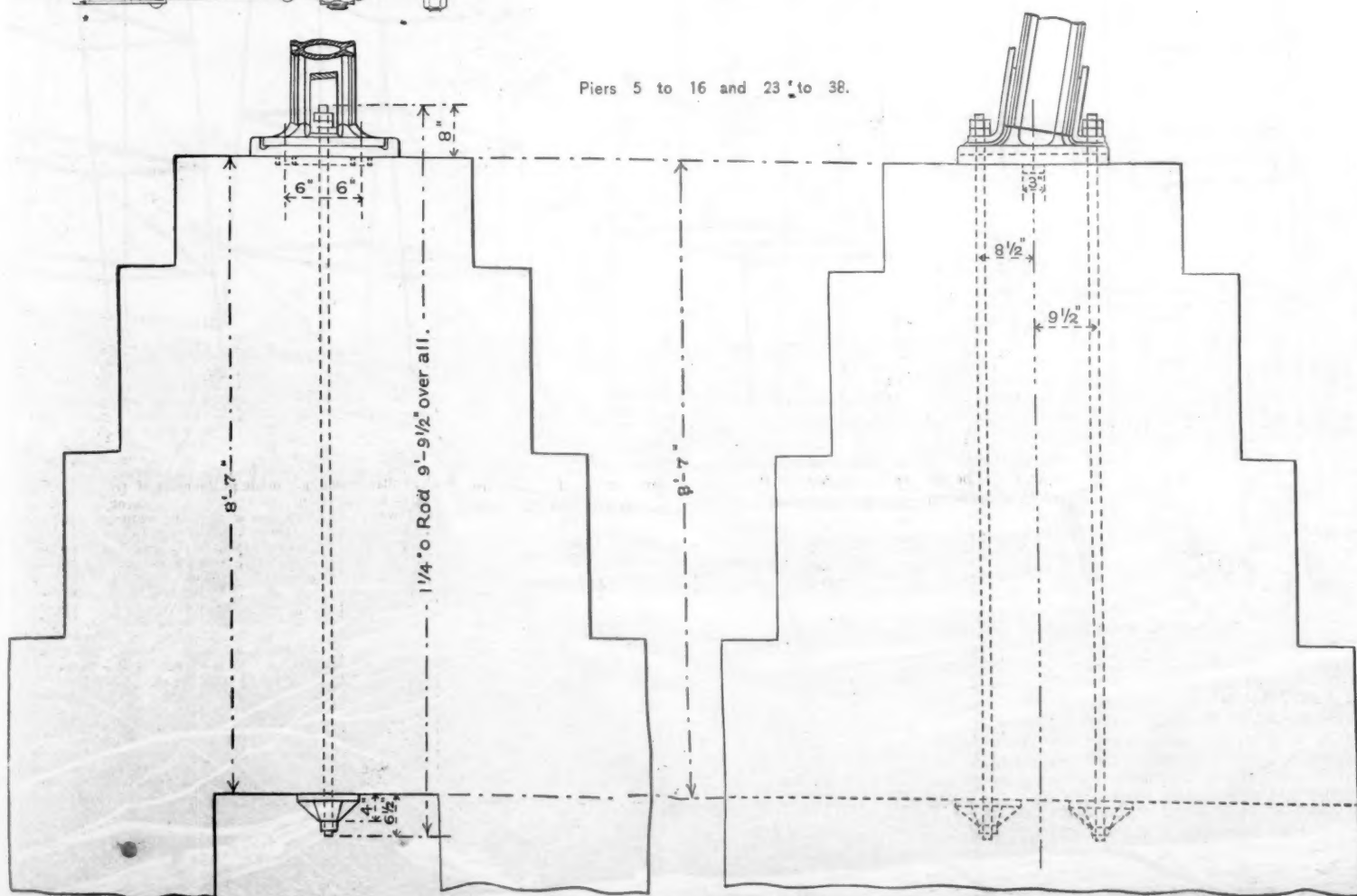


Wooden Railing.

Column Cap for Towers.



### Strut Attachment and Column Splice for Towers.



DETAILS OF KINZUA VIADUCT.



firmly bolted, thus dispensing with the flanges generally used to fasten column sections together, and giving to the column when finished the appearance of a continuous post of iron. The four columns composing each tower as above described are thoroughly braced by horizontal lattice struts and diagonal rods fastened to the columns by bolts extending through them at the sleeve joints.

The whole structure is designed and constructed to withstand a maximum tension at the base of the highest windward column of 12,000 lbs., which is resisted by a pair of 1½-in. round bolts, giving an area of 2.4 square inches, and their upward pull is resisted by their being anchored under 20 tons of masonry. The longitudinal strains are distributed by a system of continuous heavy wooden beams on the top extending the whole length of the structure, which beams also serve as guard rails to the track.

The viaduct as now completed will sustain a moving load of consolidated engines covering it from end to end; this

track having been completed to the north abutment, this crane was placed thereon, and the workmen having set in place the trusses composing the first span, it was bolted to the top of the column; the timber floor system was then put on and the rails laid across this span, thus completing the track to the first pier. The crane was then pushed forward on its truck along the track already laid, and the trusses of the next span swung by it into position in the same manner.

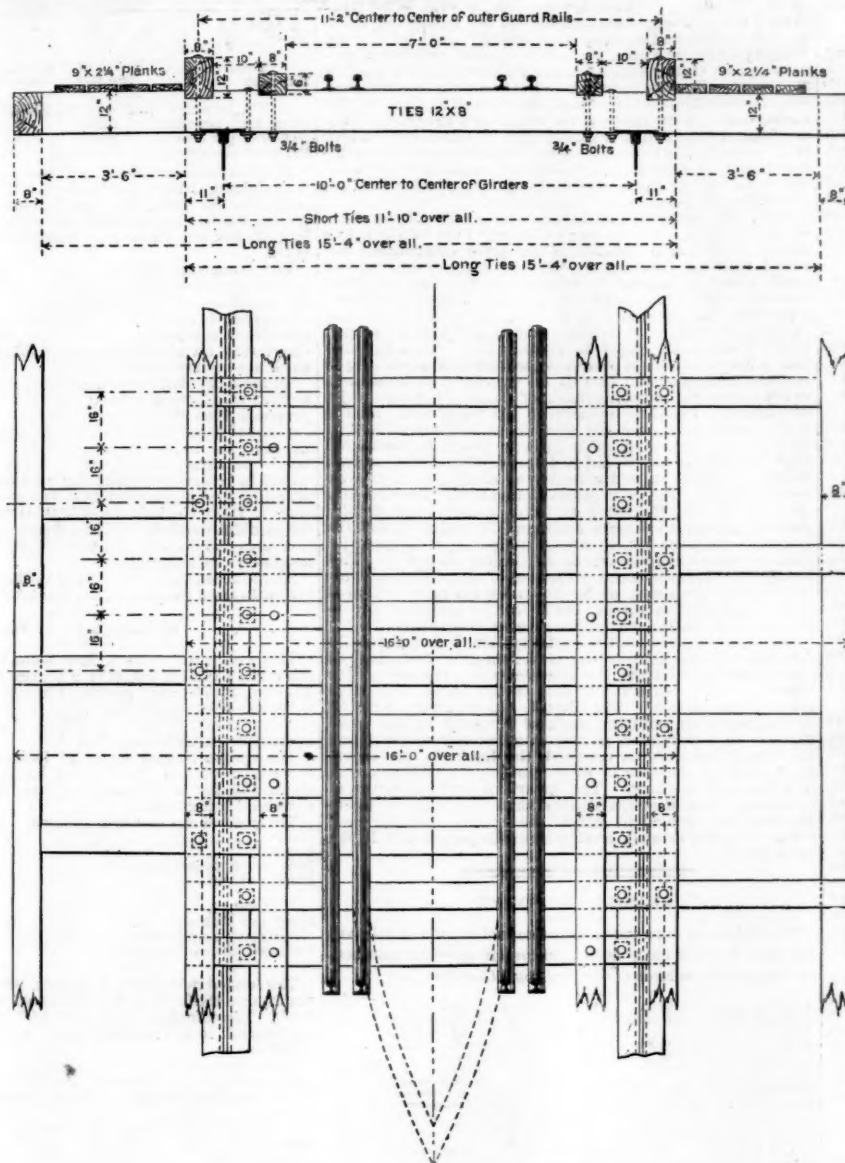
It was found that the top section of the higher towers could be more conveniently placed in position by the use of the crane; its arm was, therefore, extended, and the Phoenix columns composing the upper section were hoisted from the ground and placed in their proper position in pairs, having been previously connected by their proper bracing, so that all that remained to be done was to connect and brace these pairs by the final longitudinal bracing, thus completing the tower ready to receive the 38½-ft. span truss, which was then put in position, the track system extended over it, and

the Chief Engineer of the Company, aided by Charles Pugsley, his Assistant Engineer.

The iron work was designed by A. Bonzano and T. C. Clarke, of Clarke, Reeves & Co., of the Phoenixville Bridge Works, and was erected by them under the immediate supervision of R. A. Simmons, Superintendent of Erection, in a very skillful manner.

The engineering of the work, during its erection, was superintended by Mr. Charles Pugsley, Principal Assistant Engineer to Mr. O. Chanute, Chief Engineer of the Erie Railway, Mr. Oliver W. Barnes having resigned the Chief Engineership of the Company, to take the contract for the construction of the railroad work, July 1, 1881.

The present President of the New York, Lake Erie & Western Coal & Railroad Company is Gen. Thos. L. Kane, of McKean County, and Robert Harris, Vice President of the New York, Lake Erie & Western Railroad Company, is Vice President.



DETAILS OF FLOOR SYSTEM OF THE KINZUA VIADUCT.

is of ample strength to ensure the safe passage of the heaviest trains at high speed.

The work of erection was accomplished in the short space of four months, namely, from May 10 to Aug. 29, 1882, by a force averaging about 125 men, aided by two steam hoisting engines, and tackle requiring about 30 miles of manilla rope. The sides of the Kinzua Valley being very steep and rugged, and covered with stumps and rocks, it was necessary to lay a temporary track on the ground from the north side of the ravine to a point about half way up the hill on the south side, for the purpose of distributing the columns and braces for the towers. This having been accomplished, the work of erection began by putting up four masts 60 ft. high, having pulleys at their tops, set on each masonry base and securely guyed by ropes fastened to trees in the adjacent forest. By means of these the first four columns composing the lower section of the higher piers were placed in position, firmly bolted at the bottom and braced at the top by the horizontal members, thus rendering the lower section complete and stable. The 60-ft. masts were then shoved upwards about 35 ft. along the four columns already erected, and securely clamped, and by their aid the second section was raised into position in the same manner as the first, and likewise securely braced. This operation was repeated until the top section was reached.

It is proper to state that the first and comparatively low towers at the north end of the structure were raised entirely from the bottom in the manner above described, and completed ready for the trusses, which were swung into position from the top by means of a traveling derrick or crane which had been specially devised for this purpose. The

trusses of the succeeding 61-ft. span were drawn forward and placed in position in the same manner. This process was repeated from tower to tower throughout the remaining part of the structure.

It is an interesting fact that the workmen, as the work progressed, became so expert that they climbed the diagonal rods and walked on the horizontal struts with as much facility and safety at the greatest elevations as if they were close to the ground; no scaffolding was required for their use, and none of the men was seriously hurt during the erection of the viaduct.

#### RECAPITULATION OF DETAILS.

North abutment.....	20 ft. wide and 20 ft. high
South.....	24 " " 25 "
Total length of iron work.....	2,053 ft.
No. of masonry piers.....	110
Cubic yards masonry.....	7,000
No. of iron piers.....	20
No. of iron columns.....	110
No. of spans.....	41
Length of each pier span.....	61 ft.
Highest pier.....	34½ "
Average height of piers.....	17½ "
Width on top.....	10 "
Width at base, widest part.....	103 "
Batter of columns of piers.....	¾ of height
Batter of masonry piers.....	6 in. per ft.
Vastness of piers.....	4 ft. square on top
Base range from 8 to 18 ft. square, according to depth of foundations.....	
Pounds of iron in viaduct.....	3,500,000
Steel in track and fastenings.....	100,000
Total cost of viaduct.....	\$237,000
Time occupied in construction and erection.....	94 days

The location of the railroad and the project of the crossing of the Kinzua by a viaduct, was made by Oliver W. Barnes,

#### Railroad Right of Private Combat.

There is one aspect of the railroad war which has been lately raging in the Northwest that the public does not seem to fully comprehend. For several weeks, throughout the richest territory tributary to Chicago and along the lines of railroads extending thousands of miles, all business interests have been kept in a state of feverish uncertainty by the constant arbitrary changes made in the rates of transportation from day to day by the managers of the railroads involved in the "war." Country merchants who came to Chicago before the cutting of rates began, and paid full prices for the transportation of themselves and their goods, find that their less forehanded competitors in business are now obtaining the same service from the railroads at a fraction of what they were compelled to pay. The merchant who procrastinated about laying in his goods because he was lazy, or had not the money for what he bought, is enabled by the reductions he obtains from the railroads to undersell his prompter neighbor. The farmers who sold their wheat before rates were cut have the satisfaction of seeing those who waited till now to sell getting higher prices, since every reduction in freights is an addition to the interior price of wheat.

No merchant, no grain shipper, no lumber dealer, no farmer, no one who has anything to buy or sell knows where he stands as long as the managers of the contending corporations can exercise the prerogative of changing at any hour any transportation tax as seems good to them. These managers not only change the rates for freight and passengers from hour to hour if they choose, but they assume to say that some of the communities they serve shall have the lower rates and others shall not. People at competitive points where two antagonistic railroads meet can, while the fun lasts, pay about what they choose for going to Chicago or St. Paul or bringing goods from those places, but persons in the very next township who have but one railroad are compelled to continue to pay the old rates. Often they have to pay more, so that the collector of the transportation tax



may make out of them what he has lost by his concessions to their more lucky neighbors.

This power of capricious taxation, which not even the Czar of Russia could assume for twenty-four hours without creating a worse than Nihilistic revolution, is exercised by our railroad managers at their own discretion. They have seized it as one of the prerogatives of their crowns, and so far the public have submitted. Last year Mr. Vanderbilt, for purposes which are not yet understood, plunged the trunk lines into a war, which cost them at least \$10,000,000, and cost the business and industry of the country a good deal more. There is a novelty in the cause of the present contest in the Northwest. Competition in rates is the usual cause of irritation, but President Porter, of the Omaha road, declares that he has begun this fight to prevent the St. Paul road from building any more of its lines into "his" territory to compete with "his" road and divide "his" business. That is, the private individuals who for their brief hour are the presiding ephemera of our transportation routes, claim as their prerogative not only the right to change transportation tax from day to day for some individuals and not for others, and for some communities and not for others, and the right to keep what they call "their" territory as a monopoly, within whose limits no competition is to enter to serve "their" public, but, greatest of all, the right to settle by private war at public expense any questions that may arise between them and their rivals.

(One does not have to call himself a reformer or a political economist to see that this method of regulating the supply of transportation and its terms to the demand is an exceedingly costly one to the public. In his recent report the Railroad Commissioner of Michigan states that the cost of railroad freights has been reduced 50 per cent. since 1873, but he might have added that most of the important steps in this decline have been accompanied by struggles between the railroads so injurious to themselves and the public as to be equivalent to a series of industrial civil wars. It is of the highest importance that too many railroads be not built in this country. He is not a public benefactor who makes two railroads grow where there was one before that did all the work. The railroad history of the world bears unvarying testimony to the fact that hopes of permanent competition from parallel roads are never fulfilled. Competition always runs, sooner or later, into combination. Railroad rates must be reduced, and extravagant railroad building must be checked, but it is intolerable that these public questions be settled by private war, originating in the whims and jealousies, the love of power, the private ambitions, or the stock-gambling enterprises of the fortuitous individuals who manage our railroads. From epoch to epoch railroad rates may be controlled by the "laws of trade" and the "forces of competition," but every well-informed man knows how remote from all considerations of public policy, how mean and sinister the motives often are which determine railroad management from day to day. And we do not live by epochs, but by days.

The free and easy days of our American development, when everybody could do as he pleased because there was room for everybody and no elbow need jostle any other, are passing away. The "boundless continent" has been about all platted out. Our society is stratifying; interests are beginning to conflict; perplexing problems of adjustment, from which Young America has been free, are beginning to force themselves on us; it begins to appear that it does not pay for the citizen to be too busy to defend his rights of person and property; we are coming like older countries to the days of small things. The joyous days of the old-fashioned railroad king are drawing near the last.

He has got priceless charters for the asking, and has respected their obligations or not as he chose. He has cut through city, town and country as he listed. He has built roads through the wilderness and manufactured bonds for Wall street at his own sweet will. He has poured millions of the people's money into worthless holes in the ground without let or hindrance from the society whose resources he was wasting. When the public frenzy for railroads has been particularly strong he has sold it water on the stipulation that he was to be paid for it every year thereafter the full price of milk. He has taken possession of the iron roads and rivers of commerce and collected tolls at discretion. At the caprice of anger or self-interest he ignores the sovereignty of the state and the existence of courts and arbitrators, and devastates "his" territory by private war with another king as jocund and independent as himself.

A new figure is rising in our polity, though as yet he is a man without a shadow. It is the statesman who is to bring the railroad king within the pale of public control, who is to deprive him of the right of private combat, and compel him to submit to public tribunals questions which though they arise between one king and another, are really questions of public rights and interests. America is the only civilized country in which the right of railroad kings to wage private war has not been taken away.—Chicago Tribune.

### An Englishman's Opinion of American Railroad Wars.

In the New York Evening Post of Dec. 7 appeared the following letter from Mr. John Taylor, which is well worth the attention of all who are interested in the credit of American railroads abroad:

For the third time I have paid a visit to your country, and as I am about to sail I should like to place on record some things I have observed. I have been West and South, and wherever I have been there has been but one note as to the prosperity of the country, the enormous agricultural products, the activity of trade, and the increase of population. One evidence of this prosperity is to be seen in the extent of building operations West and East, and the character of the houses, fitted only for people with good incomes. Another sign is the national exchequer bursting with the plethora of taxation. There is nothing abnormal in this prosperity, but every sign that "to-morrow will be as this day and much more abundant." In the midst of all this we are startled by a breakdown in the stock markets, as though the industries of the country had been suddenly blighted, and war and famine were looming in the distance. No securities, whatever their merits, have escaped, and where an advance of 5 or 10 per cent. was not unreasonably looked for the fall has been of like extent. It is as though we were looking on a ship sailing over smooth seas under sunny skies and with favoring breezes, when suddenly the proud bark settles down to the water's edge and disappears from view. If we were witnesses of such a scene the natural conclusion we should come to would be that the captain was a pirate, and had scuttled his ship. To leave metaphor, the alleged reason for this state of chaos is "the war of rates" in the Northwest; but a "war of rates" comes not by the visitation of God, but by the willful act of man. As I move about among your leading business men, men of large experience, of first-class position, men who never talk at random, there seems but one concurrent opinion: that this cutting of rates is a trick, a deliberately devised plan for breaking down the markets, and will continued just so long

as it may suit the purpose of those who are in the plot. By some the whole transaction is formulated with all its antecedents. I am not saying it is so. I am only recording what is deliberately and with emphasis asserted. The action is too felonious in character to have suggested itself to me. But the strangest thing about it is that all those who thus speak of it, speak of it as something that cannot be helped. The press abounds in references to the same charge, but it is referred to as would be a plague of locusts or the east wind, as something that must be endured, and from which there is no escape. In England, if such an impression prevailed as I have heard expressed, the shareholders and the press would make it too hot for any management, however many shares they might control. But the wholesome supervision of shareholders over their property is a resource and a remedy not contemplated in this country. Well might Herbert Spencer exclaim against the patient endurance of evils which everybody admits.

In your great Republic, so far as railway management is concerned, the sovereign people—that is, the shareholders—are nowhere. If the railway is prosperous, and pays dividends, they are expected to open their mouths and shut their eyes, and take what is given; if there are no dividends, then they must shut both mouth and eyes, and if they do not like it, the only way of escape offered is to sell their shares. I am told you are too busy to look after these things, but you are no busier than we are in the old country. You can make money more quickly and easily than we can; while, as a rule, we have a greater number dependent on us. Our system of railway directors offers a better safeguard. Directors are chosen for two reasons—that they are large stockholders, and that they can give time to the management of the railway, for which they are paid. They are formed into sub-committees, and the executive is under their control. The executive of the Western roads especially has, I am told, almost unlimited power, unchecked by a directorate, whose main object in obtaining office is to use that office for the purpose of speculation.

Now, as regards this barbarous system of railway management, known as "a war of rates," I am told that this cannot be avoided, because of the great competition between railway companies; but the competition in our small island is necessarily much closer than in your great country, and I feel confident that a war of rates is no more a necessity than the carrying of revolvers and the shooting of newspaper editors. Both are uncivilized expedients, upon which your people ought to set their foot. The admission that a war of rates is a possible expedient is demoralizing to railway management. Can it be wondered at that there exists among the investing public of England a great prejudice against American securities? At the present moment the amount held over for investment in England is very large, and as the price of English railway stocks is considered high, and this money would find its way into the American market if there existed a feeling of confidence in railway management. The price of the United States 3 per cent. is on a par with the English 3 per cent. consols; but English railway preference stocks command 20 per cent., and the ordinary stock or share capital 40 per cent. higher price than American railway stocks of similar character. This indifference is not so much a question of the different value in the two countries, as is shown by the price of United States and British three, but is really a question of confidence, and this is a matter for great consideration.

One other point in your financial system I find generally condemned, and that is the Government's hoarding of money abstracted from the commerce and business of the country, which helps these raids on the credit and property of the nation. The British Government keeps its banking account with the Bank of England in the same manner as a merchant, paying in all money received and drawing it out only as required, the Bank in the meantime using the balance in their hands in the ordinary way of a banker's business. The American mind is fertile in expedients, and it seems strange that no system of banking has been devised by which the money held by Government should be made available for the purposes of legitimate trade.

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### Northeastern (South Carolina).

This company owns a line from Charleston, S. C., to Florence, 102 miles. The report is for the year ending Sept. 30. The earnings for the year were as follows:

	1881-82.	1880-81.	Inc. or Dec.	P. c.
Freight.....	\$380,141	\$333,680	I.	15.7
Passage.....	146,053	128,883	I.	17.170
Mails.....	28,035	22,190	I.	5,845
Total.....	\$560,229	\$484,750	I.	\$75,470
Expenses.....	354,083	330,956	I.	\$23,127

Net earnings.....	\$206,146	\$153,803	I.	\$52,343
Gross earn. per mile.....	5,492	4,753	I.	739
Net earn. per mile.....	2,021	1,508	I.	513
Per cent. of exps.....	63.21	68.27	D.	5.06

The increase in receipts over those of the preceding year is explained, mainly, by the larger volume of business controlled by the road, through its close connections with adjoining roads, together with the improved facilities for handling it, and not from any material advance on previous rates.

The operating expenses proper, say \$354,083, have been heavier than usual, owing to the larger expenditures upon the permanent improvements of the roadway and its superstructures; besides these, there was expended for steel rails, additional equipment, and further improvements at the Charleston terminus, the sum of \$319,534. The preferred stock has been retired.

To meet the floating obligations, held mostly by stockholders who have advanced money for improvements, it is proposed that the company should create one general or consolidated mortgage to the extent of \$18,000 per mile of its road, to cover an issue of \$1,836,000 in 6 per cent. bonds, to mature Jan. 1, 1893. Of these bonds, \$1,142,000 would be reserved to meet that amount in the present outstanding first and second lien bonds of the company, due Jan. 1, 1899, the balance of \$694,000 to be appropriated to the liquidation of the existing floating debt, and to such further uses and improvements as might hereafter be deemed necessary and expedient.

At the recent annual meeting in Charleston the stockholders authorized the issue of consolidated bonds as proposed.

### Wilmington & Weldon.

This company owns a line from Weldon, N. C., to Wilmington, 101.25 miles, with a branch from Rocky Mount to Tarboro, 17.75 miles, making 179 miles in all. The report is for the year ending Sept. 30. A branch from Halifax to Scotland Neck, 19 miles, was built during the year, but not opened for business until Oct. 1.

The equipment consists of 26 locomotives; 17 passenger, 3 combination and 8 mail and baggage cars; 271 box, 10 stock, 135 flat and 7 caboose cars; 1 pay-car, 1 wrecking car and 2 bridge cars.

The general account is as follows:	
Stock.....	\$2,082,400.00
Bonds.....	1,157,400.00
Bills, accounts and balances.....	1,121,115.86
Profit and loss.....	546,917.38

Total.....	\$3,898,833.34
Road and equipment.....	\$3,425,325.37
Wilmington Bridge stock.....	10,000.00
Cash and accounts receivable.....	463,507.97

The funded debt consists of \$321,400 sterling 7 per cent. bonds, due 1896, and \$936,000 gold 7 per cent. bonds, due 1896. The company holds \$462,000 additional bonds of the last-named issue, making total amount authorized \$1,398,000.

There were carried last year 32,874 through and 132,382 way passengers, a total of 165,256, being an increase of 40,868, or 33 per cent. The locomotive mileage was as follows:

	1881-82.	1880-81.	Inc. or Dec.	P. c.
Passenger.....	302,125	305,325	D.	3,200
Freight.....	246,529	228,125	I.	18,404
Switching and service.....	66,924	66,925	I.	290

Total.....	615,578	600,075	I.	15,503
Av. miles per engine.....	25,049	25,003	I.	640
Cost per mile run.....	13.11 cts.	11.33 cts.	I.	1.78 cts.

Cost of locomotive service was increased by higher cost of labor and materials. Two new heavy passenger engines were bought during the year, but were not delivered until its close. Two more of the same class are needed. The Wilmington shops built 50 box cars for the road, besides 50 for the Wilmington, Columbia & Augusta and 50 for the Northeastern road.

The earnings for the year were as follows:

	1881-82.	1880-81.	Inc. or Dec.	P. c.
Freight.....	\$420,937	\$449,814	D.	\$19,877
Passage.....	251,831	210,812	I.	40,019
Mail, etc.....	102,022	90,091	I.	11,931
Total.....	\$775,790	\$750,917	I.	\$24,873
Expenses.....	574,318	447,084	I.	127,234
Net earnings.....	\$201,472	\$303,833	D.	\$102,361
Gross earn. per mile.....	4,379	4,195	I.	184
Net ".....	1,170	1,097	I.	527
Per cent. of exps.....	73.27	59.50	I.	13.77

Expenses include \$121,749.26 for improvements of property and new equipment, the chief items being new warehouses and the repair shops at Wilmington.

The income account was as follows:

Assets, Oct. 1, 1881.....	\$311,656.17
Earnings.....	783,790.27
Miscellaneous receipts, premium, etc.....	52,494.24
New stock issued.....	626,200.00
Increase of floating debt.....	112,117.23
Total.....	\$1,786,257.91
Expenses.....	\$574,318.30
Sundry accounts.....	6,231.35
Bonded debt reduced.....	461,700.00
Scotland Neck Branch.....	70,950.58
Interest paid.....	94,508.71
Dividends, 6 per cent.....	106,041.00

Assets, Oct. 1, 1882.....	\$463,507.97
During the year 1,795 tons of steel rails and 88,550 new	



ties were put in the track. Two new iron bridges were put up and two new water stations built. The Scotland Neck Branch was completed and laid with 40 lbs. steel rails. New sleeping cars for the Atlantic Coast line have been contracted for. Several improvements on the road have been begun, to be completed during the current year.

#### Eastern.

This company's report is for the year ending Sept. 30, 1882, at the close of which the road worked was as follows:

	Miles.
Boston to N. H. line, owned.....	41.45
Eastern in N. H., leased.....	16.08
Portland, Saco & Portsmouth, leased.....	50.76

Total main line, Boston to Portland.....	108.29
Portsmouth, Great Falls & Conway, leased.....	71.37
Even branches owned.....	76.87
Four branches leased.....	26.93

Total.....283.46

There was no change in the mileage during the year. There are 37.88 miles of second track and 90.60 miles of sidings, making 141.94 miles of track in all, of which 177.73 miles are laid with steel.

The equipment consists of 102 locomotives and 2 spare tenders; 171 passenger, 1 parlor and 44 baggage, mail and express cars; 1,001 box, 1,013 flat and 30 caboose cars; 1 directors' car, 127 service cars and 28 snow-plows.

The balance sheet is as follows:

Stock.....	\$4,997,600.00
Funded debt.....	13,624,005.50
Mortgage notes.....	684,300.00
Bills, accounts and balances.....	728,609.95

Total.....\$20,034,515.45

Road and equipment.....	\$8,812,823.14
Real estate, stock and bonds.....	1,353,937.81
Cash and cash assets.....	780,081.54
Profit and loss.....	9,087,652.96

20,034,515.45

The funded debt consists of \$10,355,000 currency certificates of indebtedness; \$3,070,274.85 sterling certificates of indebtedness; \$390.65 scrip and \$4,000 coupon notes, convertible into certificates; \$194,400 Essex Railroad bonds; total, \$13,624,005.50. The certificates of indebtedness are secured by mortgage on the property, being in effect first-mortgage bonds, except on the few miles covered by the Essex bonds.

The traffic for the year was as follows:

	1881-82.	1880-81.	Inc. or Dec.	P. c.
Passenger.....	1,290,988	1,222,132	I.	74.836
Freight.....	718,809	665,775	I.	53.034
Service and switching.....	537,393	479,561	I.	77.835

Total.....2,573,193

Car miles.....2,397,488

Pass.-train cars.....5,628,735

Freight cars.....13,493,693

Passengers carried.....8,604,987

Passenger-miles.....93,871,712

Tons freight carried.....1,357,660

Ton-miles.....68,479,129

Av. train load.....72

Passengers, No.....74

Freight, tons.....95

Av. receipts.....1.881 cts.

Per pass. mile.....1.931 cts.

Per ton-mile.....2.035 cts.

The gross earnings per revenue train-mile were 168.8 cents; net, 55.1 cents. Motive power cost 23.95 cents per mile run. Of the freight car mileage 78.7 per cent. was of loaded cars. The average rate for through passengers was 1.512 cents; local, 2.433; season tickets, 0.828 cent. The average rate per ton-mile through was 1.169; local, 2.548 cents.

The earnings for the year were as follows:

	1881-82.	1880-81.	Inc. or Dec.	P. c.
Passenger dep't.....	\$1,903,857	\$1,732,351	I.	10.9
Freight.....	1,393,696	1,294,448	I.	7.3
Miscellaneous.....	105,525	63,475	I.	56.2

Total.....\$3,403,078

Expenses.....\$3,094,274

Net earnings.....\$308,804

Gross earn. per mile.....12.005

Net.....3.916

Per cent. of exps.....67.38

The expenses were increased by large renewals and additions to property, which were all charged to expense account. These included 19 passenger cars, 117 freight cars and three new locomotives.

During the year 1,531 tons new steel and 430 tons of new iron rails were laid, making 177.73 miles of steel now in the track.

The result of the year was as follows:

Net earnings.....	\$1,110,109.67
Interest.....	\$674,438.72
Rentals.....	218,329.99

892,768.71

Surplus for the year.....\$217,340.96

Increase in value of Maine Central stock.....358,145.17

Port., Bangor & Mt. Desert S. S. stock.....7,676.56

Total.....\$583,162.69

Accounts charged off.....\$3,119.95

Debit balance, Sept. 30, 1881.....9,067,695.70

9,070,815.65

Debit balance, Sept. 30, 1882.....\$9,087,652.96

From the surplus earnings for the year above, there was expended for improvements of road, including new equipment, new signals, new freight yards, etc., the sum of \$181,538.14, leaving a balance of \$35,802.82 unexpended.

The President's report says: "During the year 55,530 ties and 183,349 feet of other timber have been kyanized at our Portsmouth works at a cost of about \$2.32 per thousand feet. It is believed the process will materially add to the life of the material and eventually lead to a large reduction in item of expense of ties and other exposed timber.

"It has been the policy of the management to stimulate the growth of the passenger traffic, devoting special attention to the local and suburban business by giving the public increased accommodations in both the number and speed of passenger trains and in new equipment of cars and locomotives.

"The figures appended may serve to indicate the satisfactory result of this policy as shown by the increase of traffic and earnings.

"The miles run by passenger trains have increased from 1,084,615 in 1878-79 to 1,359,704 in 1881-82, an increase of 25 per cent., whereas the number of passengers carried has increased in the same time 2,069,339 passengers, a gain of 46 per cent.; and the passenger earnings have increased from \$1,451,857 in 1878-79 to \$1,903,856 in 1881-82, a gain of \$451,990, or 31 per cent.

"The freight traffic has also largely increased, the earnings of the past year being \$405,651 in excess of those of 1878-79, a gain of 41 per cent.

"The heavy outlay for expenses necessitated by this increased traffic has been more than provided for by the earnings, and the net earnings of 1881-82 show a gain of nearly 12 per cent. as compared with those of 1878-79.

"The improvement in the financial condition of the company is also a marked one, as may be seen by reference to the general balance sheet of Sept. 30, 1882:

The immediate cash assets, exclusive of investments, etc., are.....	\$780,081.54
The current floating debt for traffic balances, accrued interest, etc., is.....	728,609.95

Making a net cash asset of.....\$51,471.59

"It is the pleasant duty of the board to again express their appreciation of the fidelity of the heads of the departments and the employees generally to the interests of the corporation."

#### New York & New England.

This company works a main line from Boston to the Hudson River opposite Newburg, N. Y., 228.56 miles, of which 11.03 miles are leased from the Newburg, Dutchess & Connecticut. It owns branches from Providence, R. I., to Willimantic, Conn., 58.50 miles; Brookline, Mass., to Woonsocket, 33.75 miles, and six shorter branches, 23.37 miles in all. It leases branches from Franklin, Mass., to Valley Falls, R. I., 18.60 miles; Vernon, Conn., to Rockville, 4.40 miles, and East Hartford, Conn., to Springfield, Mass., with branch, 36.90 miles. This is a total of 333.18 miles owned and 65.52 leased, 398.68 miles in all. It also leases the Norwich & Worcester road, 66.40 miles, but its earnings are not included in the report, which is for the year ending Sept. 30.

The equipment consists of 117 locomotives; 135 passenger, 1 parlor and 37 baggage, mail and express cars; 1,496 box, 3 stock; 458 flat, 1,019 coal and 40 caboose cars; 1 directors' car, 6 miscellaneous cars and 377 dump cars. This includes 16 locomotives, 300 box cars and 800 coal cars owned by car trusts.

The general account is as follows:

Stock.....	\$20,000,000.00
Bonds.....	11,742,000.00
Due on notes and land purchases.....	1,734,432.06
Accounts and balances.....	837,401.16
Profit and loss.....	930,543.19

Total.....\$35,244,376.41

Road and equipment.....\$33,134,617.09

Materials.....306,552.48

Accounts and balances.....793,309.41

Due on state stock subscription.....921,930.00

Cash.....85,967.43

Total.....\$35,244,376.41

The amount of stock is that of the Berdell bonds for which stock was to be issued. Of these \$16,502,000 have been actually exchanged and the stock issued, leaving \$3,498,000 still to be exchanged.

The bonded debt consists of \$8,000,000 first-mortgage 7 per cent. bonds, \$4,000,000 first-mortgage 6 per cent. bonds, and \$1,742,000 second-mortgage 6 per cent. bonds issued for purchase of state stocks as noted below.

The traffic for the year was as follows:

	1881-82.	1880-81.	Inc. or Dec.	P. c.
Passenger.....	1,297,838	1,225,194	I.	72.644
Freight.....	926,074	670,388	I.	255.686
Service.....	55,529	52,301	I.	3.228

Total.....2,279,441

Car-miles.....1,947,883

Passenger-train.....5,807,808

Freight.....4,536,082

Passengers carried.....4,738,566

Passenger-miles.....9,115,106

Tons freight carried.....1,223,413

Ton-miles.....45,144,271

Av. train load.....43

Passengers, No.....37

Freight, tons.....96

Av. receipts.....2.090 cts.

Per pass. mile.....2.200 cts.

Per ton-mile.....0.410 "

Net.....1.772 "

Net.....0.400 "

The tonnage of company freight (included above) was 107,097; ton miles, 8,114,275, against 46,618 tons and 2,075,972 ton-miles the previous year.

During the year there were 2,978 passenger cars and 76,785 freight cars transferred to and from Jersey City, and 34,006 freight cars transferred at Newburg.

The earnings for the year were as follows:

	1881-82.	1880-81.	Inc. or Dec.	P. c.
Freight.....	\$1,837,890	\$1,420,758	I.	29.3
Passengers.....	1,171,623	1,029,586	I.	14.7
Mail and express.....	136,374	106,436	I.	29.938
Miscellaneous.....	150,902	135,594	I.	21.308

Total.....\$3,302,789

Expenses.....\$2,692,374

Net earnings.....\$610,415

Gross earn. per mile.....8.271

Net.....2.614

Per cent. of exps.....71.44

The average mileage worked was 380.12 miles last year, against 325.56 miles the previous year.

Renewals included 3,511 tons steel rails, 490 tons rolled iron rails and 165,603 new ties. There are now only 5.29 miles of iron in the main line, and this will soon be replaced with steel.

The result of the year was as follows:

Excess of earnings over operating expenses.....	\$943,173.46
In. from other sources, including premium on bonds sold.....	152,169.31

\$1,095,342.77

Taxes.....\$117,916.81

Insurance.....10,486.53

Interest on funded indebtedness.....50,836.28

Interest on floating debt.....77,209.40

Rent of other roads.....74,965.90

Boston grain elevator expenses.....2,704.23

Worthless accounts.....1,023.35

Available net earnings.....\$760,306.27

Interest on first-mortgage bonds.....\$645,746.00

Int. on second-mortgage bonds, two months.....17,430.00

683,166.00

Surplus for the year.....\$97,134.27

In addition to the earnings as shown, the company received for a portion of its Hartford grounds \$69,879.81, which sum was credited to property account, and has been expended in improvements at other points on the road. The revenue from local freight business increased 26.15 per cent. and from foreign freight business 31.58 per cent., an average of 29.36 per cent. The passenger revenues increased 16.01 per cent. from local and 8.5 per cent. from foreign business, an average of 13.42 per cent. The coal tonnage increased from 193,944 tons in 1881 to 274,335 tons in 1882, or 41.45 per cent.

In January last, connection was made with the New York, Lake Erie & Western Railroad, at Newburg, by the transfer steamer, "William T. Hart," carrying 24 cars, and costing \$176,995.95; and business was thereby immediately opened with that road and its connections.

The report refers to the increase of the through freight busi-

ness of the road, and of the necessity for holding back certain classes of freight in November until additional sidings and yards that were under way could be completed. It says that "These sidings could not be built until after the sale of the state's stock in August. Since that time 23 miles of siding and yard tracks have been completed at different points, while 11.01 miles are now under construction and will soon be completed. The management feels confident that, when these are ready for use, it will be able to transact promptly all the business that is offered; but it is clearly of the opinion that the business of the road cannot be done in the best manner without the double-tracking throughout its whole length—certainly not without a double track from Boston to Hartford. The directors therefore have resolved to continue this work so long as the available means on hand will allow, and as second-mortgage bonds can be advantageously disposed of for this purpose. During the year the double track was extended and put into operation from Walpole to Franklin, a distance of 8 miles; and between Hartford and Burnside, a distance of 2.6 miles; and contracts have been let for its extension from Franklin to Blackstone, 9 miles; from Burnside to Vernon at the junction of the Rockville Branch, 8.2 miles; and from Hartford to Newton, a distance of 5 miles. It is proposed to let the contract for the extension from Putnam to Willimantic, 24.6 miles at an early day. The completion of these sections will give the company 78.4 miles of double track. Of the 23 miles of sidings added during the year, 5 miles will constitute a portion of the main line when the double track is extended."

The permanent improvements made during the year include the completion of the extension of the road from Brewster to Fishkill; extension of the double track from Walpole to Franklin and Hartford to Burnside; completion of the elevator and new ware and freight houses at the Boston terminus; the filling of a large area on the South Boston flats; the completion of a new freight house at Hartford and two new shops at Norwood; the purchase and laying-out of a large transfer yard at East Hartford, and many other improvements at local points on the road. The balance due the state under the contract for the purchase of the 50-acre tract of South Boston flats has been in controversy for several years; but a compromise has been effected, by which it is agreed that the sum due the state is \$100,000. This amount the company is to pay in 10 years, with interest at 5 per cent. from the date of the agreement; a deduction to be made if Northern avenue is ever laid out across the territory to be conveyed. The papers, however, in this settlement have not yet been passed. The increase in business the past year required a corresponding increase in its equipment; and it was decided to purchase this through what is known as the New England Car Trust, an association formed for the purpose of purchasing cars to be leased to the railroad company at a fair rental. The railroad company agrees to pay a rental of 6 per cent on the cost of the equipment, and to pay for the rolling-stock itself in 10 yearly installments of 10 per cent each. Experience shows that the mileage earnings of these cars will be sufficient to pay the interest and principal due the Car Trust as they fall due.

The necessities for better facilities in Providence have long been felt; but, owing to legal complications in that city (now fortunately nearly removed), the company has not been able to carry out the improvements it desired to make. Pending a definite settlement of the disputed questions, the company has petitioned the city government for the temporary occupancy of such territory as it actually needs, agreeing to pay the city a proper compensation for such use, but neither party waiving any of its rights by such occupation. This the city will probably grant.

Although this company has had the actual possession since 1878 of that part of its property in Rhode Island, formerly known as the Hartford, Providence & Fishkill Railroad, it has not had a complete title to the property during all that time. The trustees under the mortgage made by the Hartford, Providence & Fishkill have received a rental, and now have in their hands about \$90,000 belonging to this company, to be paid over to it as soon as the question of compensation of the trustees is disposed of, which will probably be at an early date.

Reference is made in the closing portions of the report to the sale to the Boston & Albany of that part of the Woonsocket Division between Brookline and Newton Highlands, about 5.3 miles in length, for \$415,000, the price determined by Commissioner Albert Pink, to whom the question of valuation was referred; and it is stated that when this money is received by the company it will be expended in the extension of the double track. The sale of the state's stock in the road to the company is also recorded. The fact is recalled that in connection with the authority to sell, the legislatures of Massachusetts, Rhode Island and Connecticut authorized the making of a second mortgage on the road, and the issue of bonds thereunder, to the amount of \$5,000,000. The state of Massachusetts agreed to sell its 34,750 shares of stock for 50 cents on the dollar, and to receive in exchange therefor second mortgage bonds at par. It was also provided by the act that the New York & New England stockholders should have the right to take this stock in the proportion of the number of shares held by each, paying therefor \$50 per share. The stockholders availed themselves of this privilege, and bought 33,830 shares of the stock, leaving only 920 shares in the possession of the company, to be disposed of by the directors. The stock subscribed for is now in the process of transfer from the state to the stockholders, it never having come into the actual possession of the company. The result of this sale was equivalent to the sale of \$1,737,000 of the second-mortgage bonds of the company at par. The proceeds of this sale, and also of five bonds in addition sold at par, have been and are being used to pay the floating debt of the company, and for making permanent improvements on the line of the road.

The outstanding unsecured notes of the company, Sept. 30, 1882, amounted to \$422,900. These notes have since been reduced to \$90,000, not yet due, but which will be paid at maturity from funds in the hands of the treasurer. The last payment is due Feb. 8, 1883, and after that time the company will have no floating debt. At the close of the last fiscal year, if the company had received from the subscribers for the state's stock the amount of their subscriptions, and had paid therefrom its entire unsecured floating debt, it would have had in its possession available for making permanent improvements during the current year funds to the amount of \$250,000; due from the trustees under the Hartford, Providence & Fishkill mortgage, about \$75,000; amount since awarded for that portion of Woonsocket Division to be sold to the Boston & Albany, \$415,000; total, \$740,000. It also has on hand unissued 3,258 of its second mortgage bonds, which at par would amount to \$3,258,000; making the means of the company available for permanent improvements \$3,998,000. When the improvements which the expenditure of this amount will pay for are completed, this company will have mortgages on its property to the amount of \$15,000,000, the annual interest on which will amount to about \$1,000,000. The directors are confident that, after these improvements are ready for use, the property will earn not only enough to pay this interest, but also regular dividends on its entire capital stock.





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S. WRIGHT DUNNING AND M. N. FORNEY.

## EDITORIAL ANNOUNCEMENTS.

**Passes.**—All persons connected with this paper are forbidden to ask for passes under any circumstances, and we will be thankful to have any act of the kind reported to this office.

**Addresses.**—Business letters should be addressed and drafts made payable to THE RAILROAD GAZETTE. Communications for the attention of the Editors should be addressed EDITOR RAILROAD GAZETTE.

**Contributions.**—Subscribers and others will materially assist us in making our news accurate and complete if they will send us early information of events which take place under their observation, such as changes in railroad officers, organizations and changes of companies, the letting, progress and completion of contracts for new works or important improvements of old ones, experiments in the construction of roads and machinery and in their management, particulars as to the business of railroads, and suggestions as to its improvement. Discussions of subject pertaining to ALL DEPARTMENTS of railroad business by men practically acquainted with them are especially desired. Officers will oblige us by forwarding early copies of notices of meetings, elections, appointments, and especially annual reports, some notice of all of which will be published.

**Advertisements.**—We wish it distinctly understood that we will entertain no proposition to publish anything in this journal for pay, EXCEPT IN THE ADVERTISING COLUMNS. We give in our editorial columns OUR OWN opinions, and those only, and in our news columns present only such matter as we consider interesting and important to our readers. Those who wish to recommend their inventions, machinery, supplies, financial schemes, etc., to our readers can do so fully in our advertising columns, but it is useless to ask us to recommend them editorially, either for money or in consideration of advertising patronage.

## STANDARD SCREW-THREADS.

Probably very few persons, excepting those who have been directly and actively interested in the matter of having a common standard system of screw-threads adopted generally, have any idea of the difficulties which have been encountered in prosecuting that work. A brief history of these difficulties was given in the report made by a committee to the Master Car-Builders' Association at the meeting held last June.\* The members of the original committee of the Franklin Institute, who years ago recommended the Sellers system of screw-threads, evidently ceased their efforts after making their report. They seemed to regard the duty delegated to them to be that of erecting a signboard to indicate what should be done. Unfortunately, however, few important reforms can be effected in this way. To induce large numbers of people to do a certain thing, or adopt any given course of action, it is not enough to show that what is proposed is wise and right, but various expedients must be resorted to to persuade, to convince, and to compel them to adopt the reformatory measure. The mere dissemination of the required information which will enable a large number of people, scattered over a great extent of territory, to understand such a subject as that of a standard system of screw-threads is very difficult. To communicate the required knowledge it is not sufficient to publish it in the technical newspapers, to announce it by circulars, to describe it in books, or to formulate it in reports. A large proportion of the people to whom such information should be communicated do not read technical newspapers, they will not pay any attention to circulars, books they abhor, and they are not able to understand reports. Notwithstanding all the discussion, both in print and at the various conventions of railroad officers, of the subject of standard screw-threads, we venture the assertion that not half of the master mechanics and master car-builders in the country could tell what the essential features of the Sellers or Franklin Institute standard system of screw-threads are—that is, they do not know what the true diameter, the pitch, or the form of threads must be to conform to the standard, and they would not know where to look to find out. In one case we have learned that a master mechanic ordered the Sellers standard taps and dies of a manufacturer, and the order was filled with tools having a sharp V thread. The purchaser knew so little of the peculiarities of the standard system of screw-threads that he accepted what the manufacturer sent and was then surprised that the nuts and bolts would not interchange with those of other makers. The Pratt & Whitney Company and other manufacturers of taps and dies state that they are constantly receiving orders from railroad companies

for such tools "a thirty-second large." The committee which reported on this subject to the Master Car-Builders' Association did all it could to disabuse the minds of the members of that Association, at least, of the error of that practice. That committee among other things reported:

"The committee wish to impress upon this Association that a specific diameter of the screw is an essential feature of the Sellers system. A screw with a Sellers thread must be of one of the diameters given in the table. There are no other sizes in the system, excepting some larger than those given, which are not used in car construction. There is no such thing, for example, as a Sellers screw  $\frac{1}{16}$  in. in diameter. That size is not recognized and has no existence in the system, and if a screw is made, as is often done,  $\frac{1}{16}$  in. in diameter "a sixty-fourth" or "a thirty-second" large, it ceases to be a Sellers screw. Uniformity in diameter is as essential to interchangeability as uniformity in the number of threads per inch or the shape of the threads, and the importance of maintaining the former cannot be too strongly urged on this Association. Just as soon as the practice is introduced of making screw threads "over size," or a thirty-second or sixty-fourth large, interchangeability of bolts and nuts becomes impossible. If the Sellers standard is adopted no screws should be tolerated which are a fraction of an inch larger or smaller than the diameter specified for that system."

After the report was read the Car-Builders' Association adopted the following resolution:

"That this Association deprecates the use of screws larger or smaller in diameter by a small fraction of an inch than the sizes specified for the Sellers or Franklin Institute system; and that all its members are urged to abandon entirely the use of over or under-size screws."

Notwithstanding the reiteration of this injunction so often, quite recently one of the largest car manufacturing companies in the country, if not the largest, and one which is controlled by the most enterprising, skillful and intelligent management, ordered a set of taps of the Franklin Institute standard "a sixty-fourth large." This order it was induced, however, to modify, and to take taps of the standard diameters.

This long prelude has been written to show how very difficult it is, in effecting a reform like this, simply to disseminate and communicate the required information, which will induce those people who should do so to adopt a standard of this kind. To do this the recommendation must be reiterated and repeated over and over again. It must be presented and reflected at various angles, so that it will be observed even by the dead stare of dullness, and it must also be whispered gently so as not to excite a spirit of contrariety, which is so strong in some characters. It was said of some skeptic that he disbelieved the Christian religion because he did not invent it himself. For the same reason, some master mechanics and car-builders will not adopt the Sellers standard system of screw-threads. Whatever there is of truth in the observation that the natural condition of mankind is a state of war is illustrated in the propensity which is so common among many people to resist anything like concurrence with others. Argument and reasoning have little influence with some of them. It is enough for them to know that there is a request for co-operation. They dissent because they feel themselves to be superior to everybody else, and concurrence with others would imply equality, and their vanity suggests to them that dissent indicates pre-eminence. There is a converse characteristic in human nature, which prevents persons from adopting any ideas or course of action until they are sure that a majority holds such opinions. Such people will never knowingly take the risk of being on the weak side of any issue.

Owing to the prevalence of characteristics such as have been pointed out, it is nearly always the lot of those who undertake to carry out any reform that they must have much patience and persistence, with more or less skill and ingenuity in taking advantage of the opportunities which offer and the peculiarities and weaknesses, possibly, of those who must be convinced, but at the same time they must be ready to use such authority and influence of a mandatory character as events may throw into their hands.

This is not an imaginary picture which has been drawn, but it has been the experience of those who for years past have earnestly endeavored to bring about the adoption of a uniform standard of screw-threads in the construction of railroad machinery and rolling-stock.

The mechanical difficulties which have also stood in the way of the general adoption of a uniform or interchangeable system of screw-threads were also very great. Happily these have been overcome through the enterprise, the skill and the liberality of the Pratt & Whitney Company of Hartford, and through them the Master Car-Builders' Association has been able to procure a standard set of gauges, on the accuracy of which the most implicit reliance may be placed. There is, however, still one step to be taken. The Franklin Institute years ago took what may be called the legislative step and formulated what the standard system of screw-threads should be. The Pratt & Whitney Company then assumed judicial functions, and decided by actual and precise measure-

ments what that system is. But the executive part of the reform is not yet adequately provided for. To illustrate this let it be supposed that a railroad company is disposed to adopt the Sellers system of screw-threads. There are at present no convenient means which a master mechanic can employ and which will enable him to be certain that the screw-threads conform with sufficient accuracy to the standard. They may, it is true, order taps and dies of the Pratt & Whitney Company, with very great confidence that they will be right; but quite naturally some companies say, we do not wish to give a monopoly of this business to one firm or company. We want to buy taps and dies in the open market, and we want some ready means of knowing whether they are made with such precision that the interchangeability of bolts and nuts will be maintained. It is true that the Car-Builders' Association has provided itself with a set of screw-gauges to be used as a standard of final reference, but it is impracticable to refer to these in the inspection of every lot of taps and dies received by the various railroad companies in the country.

It is also true that the Pratt & Whitney Company is prepared to furnish duplicate gauges of this kind, but even then there comes up the question *how near* to the gauges taps and dies must conform. Every good practical mechanic knows that *absolute* precision is unattainable, and, therefore, in the inspection of such tools it will be necessary to determine how much difference is allowable.

The same thing is true of bar iron. For a long time it has been the practice of rolling mills to roll round iron over-size. That is, a  $\frac{1}{2}$  in. bar would be  $\frac{1}{16}$  or  $\frac{1}{8}$  in. in diameter, instead of  $\frac{1}{16}$  and  $\frac{1}{8}$  in. The reason for this practice probably was that the manufacturers found that by doing so they sold more pounds of iron. At any rate, instead of resisting the practice of the manufacturers, and to avoid cutting off the superfluous metal with the screw-cutting dies, the master mechanics and car-builders made their taps and dies of larger diameter, to suit the over-size of the iron.

With the introduction of the standard system of screw-threads it has been found necessary to resist the practice of the iron makers in furnishing over-size bars, but here the same difficulty came up that is found in inspecting taps and dies, that is, to know how much variation in the diameter of bar iron is permissible. Should it be 1-100 or  $\frac{1}{16}$  of an inch, or half or double these amounts? Without some positive rule for receiving or rejecting iron it is evident that what one man might accept another would reject. It is therefore proposed to establish a limit-gauge for inspecting iron. This will consist of a plate with two openings for each size of iron similar to those in an ordinary wire-gauge. One of these openings will be made say  $\frac{1}{16}$  in. smaller than the standard size, and the other  $\frac{1}{16}$  in. larger. It will then be specified that all bar iron shall enter the one gauge, but not enter the other. This will supply a positive means of inspecting such material which will be certain and will leave no room for question as to what should or should not be accepted. The amount of allowable difference in bar iron will be one of the questions to be discussed at the meeting of the Car-Builders' Club.

The Pratt & Whitney Company has also promised to submit specimens of screw limit-gauges. These, we believe, are to consist of two screw plugs for each size of screw. One of these is to be a small fraction of an inch larger than the standard size and the other the same fraction smaller. Having such gauges a master car-builder on receiving a lot of taps would simply cut a sample nut with each one and then try it on the limit gauges. If it will screw on the large gauge the tap is too large; if it will not screw on the small one it is too small. With such gauges it obviously will be easy to maintain a standard system of screw-threads with a sufficient degree of precision to make bolts and nuts interchangeable, and that is all that need be aimed at.

## RATES, TONNAGE AND EARNINGS.

There have recently been issued from Mr. Fink's office, compiled by the General Agent, Mr. H. C. Blye, diagrams showing the course, from month to month, of the tonnage of the through shipments eastward from Chicago since 1878, of the rates, and of the gross earnings. The tonnage is that which we report weekly, and more at length monthly, including all freight which passes over the whole length of the several roads from Chicago to or beyond the western termini of the trunk lines—to Toronto, Suspension Bridge, Buffalo, Salamanca, Pittsburgh, Wheeling and Parkersburg, or to points further east, whether shipped at Chicago or at points further west but passing through Chicago. Though during a great part of the time since 1878 there has been a railroad war over this traffic, records of it have been reported by all the

\* See Railroad Gazette of June 7, 1882.



lines, and these records form the material for the statistics treated by the diagrams.

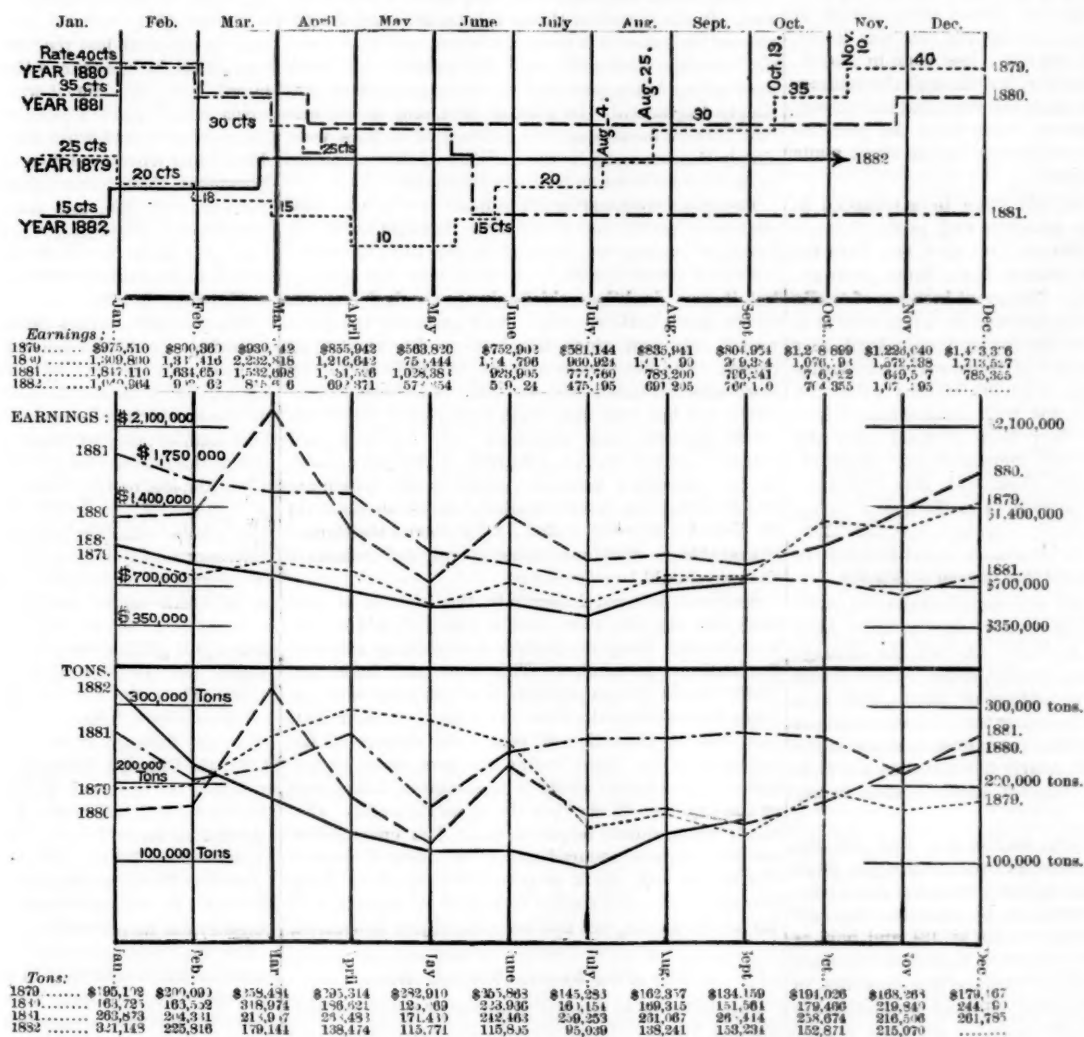
The rates, except in the first half of 1879, are those at which the freight was billed, and except during periods of railroad war are correct. They are, however, the rates for one class only—that including grain and flour—the lowest class, but including usually two-thirds or three-fourths of the total. The rate on most provisions is 5 cents per 100 lbs. higher. The classes of freight paying more than provisions make but a very small proportion of the whole—less than 2 per cent. Live stock is not included; it is not distributed like other freight among the several roads, is much more regular in its movement, and not liable to great fluctuations, and is as distinct a traffic from freight in many respects as passenger traffic.

The earnings shown on the diagrams are not the absolute earnings, but the amounts which the tonnages reported would have produced at the rates reported if all had been carried to New York. Not all was carried to New York, but some was of a higher class than grain and paid a higher rate, and it is assumed that the shipments at less than New York

plan, the quantities for each being represented by the length of the ordinate (perpendicular line) for the month above the base. In the diagram for rates (the upper one) time is represented by the horizontal distances between ordinates, as well as quantity by the height of the ordinates, and so it has been necessary to have 12 spaces to show rates, while we need but 12 lines (and consequently 11 spaces) to show tonnage and earnings. By doing this we are able to show for how many days in the month a rate prevailed.

Little more comment is required to enable the reader to follow these diagrams intelligently and, we hope, with interest. We see how in 1881 the heaviest traffic was in January (when the rate was highest) how it continued heavy till May, and then fell as usual on the opening of lake navigation; but when the low rates made it as cheap to ship by rail as by lake, it rose far above what had ever been known before after June until November, but then and in December was but about the same as with the rates of the previous year (which were more than twice as high). Coming down to January of this year, with rates

for each year on the three diagrams. Observe these lines in 1879, a year of the greatest fluctuations in rates, and in 1880, the year of the greatest stability of rates. By following the three lines at once we shall be able to trace the effect of rates on traffic and earnings, and on the results accompanying changes in rates, which results are not always the effect of the rates, by any means, these being but one of the factors in the problem, the quantity of Western produce seeking a market, the demand for it in the East and in Europe, and the condition of navigation by lake and canal being other and most important factors. It need not be said that nothing can make shipments heavy when there is little to ship. We find an apparent contradiction of this after the harvest of 1881, when in every month but one until March the Chicago rail shipments were larger than ever before. But then we must remember that while the supply of small grain was small, the supply of corn, coming from the bountiful crop of 1880, was large; further, that the year's supply of grain may be all ready for shipment within two or three months after harvest, so that while there cannot be large shipments for the year after a



CHICAGO THROUGH SHIPMENTS EAST—RATES, TONNAGE AND EARNINGS MONTHLY SINCE 1878.

rates were balanced by the shipments of the higher classes. And this is quite probable. There is one serious source of error, however, and that is in the rates reported during the railroad war last year. These rates were taken from the way-bills, and this was all the positive information accessible, but the low rates of the railroad war were made very largely by rebates, and after July they were nearly always lower than the 15 cents per 100 lbs. shown on the diagram, not averaging more than 12½ cents we should judge, and in January last as low as 10 cents most of the month, while the recovery to 20 cents here shown to have been made Jan. 28 probably affected but a small part of the shipments until some time in March.

The excess in these rates, of course, makes too large the earnings reported while those rates were in force.

The rates reported in 1879 during the railroad war seem to be much nearer the actual rates. It will be seen that 10 cents was the rate then from May 1 to June 9, and we do not think the average could have been lower than that.

We copy the diagrams issued from Mr. Fink's office in a slightly modified form. The two lower ones (tonnage and earnings) are made on the same

lower rather than higher than in the closing months of 1881, we attain the maximum tonnage, which fell off rapidly afterward, chiefly by reason of the exhaustion of freights to be shipped, but partly also because of an advance in rates from probably 10 cents in January to 25 cents at the end of March and since. The diagram shows a gradual recovery since July. Since it was made we have the October and November tonnages, the latter about the same as last year, and little less than in 1880, and we have added the figures for these and for the corresponding earnings.

On this diagram of tonnages we find the most frequent and sharpest fluctuations in 1880, which was a year of stiffly maintained rates. The shipments were nearly twice as great in March as in February or January, and fell off immediately in April and May, rose sharply in June, and were more regular afterwards. The greatest amount of fluctuation has been in 1882, however, the shipments being greater in January and less in July than in any other months recorded. The fluctuations are not violent, however. The shipments fell off from January to July, and rose afterwards, with something like regularity.

To trace the correlation of rates, tonnage and earnings, the reader should compare the lines for these

bad harvest, there may be very large ones for some months of that year. Furthermore, with rail rates on a paying basis, the Chicago shipments of grain are always made chiefly by lake: by carrying at less than cost the railroads may attract to themselves nearly all this lake traffic, and so have a larger traffic themselves when the total shipments are smaller. Now this occurred last year; the railroads diverted a large part of the traffic from the lakes, and increased their share of the total thereby; by their low rates and for other reasons shipments were stimulated in the first half of the crop year; but by March little grain was left in the country to come forward. The supply was so far exhausted that the shipments from the West were extraordinarily small until the new crop was harvested, while the corn shipments have been extraordinarily small until now.

The year 1879, we have said, was one of extraordinary fluctuations in rates. The year began with irregular rates, which declined almost continually until June, when contracts were outstanding to some extent, which prevented the general restoration of rates until near the end of August, but then, under the influence of a great pressure of traffic and the co-operation of the roads, rates rose rapidly, and the winter rate was

established at 40 cents per 100 lbs. as early as Nov. 10, and was maintained at that figure until March of 1880, and for six weeks longer at 35 cents. The period of low, irregular and frequently changing rates lasted from the beginning of the year 1879 until August. Notice on the diagrams the course of traffic under these rates, how it rose in the spring and was much heavier in May and June, after navigation opened, than in January and February, when everything had to be shipped by rail. The great falling off from 256,000 tons in July to 145,000 in June was probably not due to the advance in the rate, but to the exhaustion of traffic; for an advance from 20 cents in July to 30 cents in September and 35 in October was followed by a decided increase in shipments, which remained large under the 40-cent rate that lasted from Nov. 10, 1879, till March 1, 1880; while under the 35 cent rate in March, 1880, the shipments (though the opening of navigation was close at hand) were larger than in any other month on record except last January, when with a rate averaging perhaps not more than 10 cents the shipments were a little larger. Under the steady and well maintained rate of 30 cents from April 13 to Nov. 27, 1880, the fluctuations of traffic were considerable, being caused by the other factors we have spoken of. Lake navigation opened about the 1st of April, and in that month, though the rate was lower, the shipments were 70 per cent. less than in March, they fell still further in May, but through the summer were large for that season of the year, and rose to very high figures in the last two months of the year, increasing after the winter advance in rates was made near the end of November.

But tonnage is not the only thing to be regarded in adjusting rates. It is earnings and profits that the railroads seek. The difference between the lines for earnings and those for tonnage in the same years are especially worth notice. The great increase of traffic in the spring of 1879 that followed the great reduction in rates and sends up the line for tonnage in April, May and June was not accompanied by any corresponding increase in gross earnings. With 200,000 tons in January the roads earned \$975,000; with 282,000 tons in May they earned \$566,000. They filled all their cars and crowded their tracks and increased their expenses, and reduced their receipts 42 per cent. But when they restored rates and the pressure of traffic had in a manner compelled them to make a 40-cent rate, how their earnings swelled; 283,000 tons earned but \$566,000 in May; in December 179,000 tons earned \$1,433,000.

In no other year do we find such contrasts in earnings, though this year, as we have shown, there have been greater ones in tonnage. In 1880 the tonnage and earnings are almost parallel, because rates varied so little. The enormous tonnage of March, 1880, at a rate but a dollar a ton below the highest of recent years, produced \$2,233,000—four times as much as the earnings in May of 1879, nearly five times as much as in last July, and an amount never equaled in any other month.

For reasons given above, we feel sure that the figures given on the diagrams for earnings are too large for all the months of the railroad war after July, 1881. We will venture to revise them by assuming that half the tonnage in August was carried at 12½ and half at 15 cents (instead of all at 15 cents), that thenceforward till the end of the year the average was 12½ cents, in January 10 cents, in February 13½, and in March 17½ cents. On this basis the earnings in these months were, compared with those in the diagram:

	By estimate.	By diagram.
August.....	\$717,934	\$783,300
September.....	683,335	796,241
October.....	646,685	776,022
November.....	541,285	649,517
December.....	654,432	785,355
January.....	642,296	1,049,904
February.....	620,994	903,262
March.....	727,004	815,606

That is, we estimate from the rates known to have been made on a very large part of the traffic that the earnings on Chicago shipments during the railroad war were \$1,345,092 less than the way-bills made them, and that no less than \$407,668 of the excess was in the month of January, when we know that great quantities of flour were carried to New York at eight cents per 100 lbs., or at the rate of one-sixth of a cent per ton per mile. If our estimate for this month is correct, the tonnage then, larger than in any other month, produced \$642,300, while that of March, 1880, which was slightly less, produced \$2,233,000. Yet a high rate would seem more practicable in January than in March, just before navigation opened.

If now we estimate the cost of carrying to the railroad companies to have been 15 cents per 100 lbs., we shall find the contrasts greater still. The average cost of carrying through freight from Chicago is probably fully as much as this, which is at the rate of 0.306 cent per ton per mile by the longest route and 0.329

cent by the shortest. At this rate the net earnings from the Chicago shipments were:

	1879.	1880.	1881.	1882.
January.....	\$390,204	\$818,625	\$1,055,491	*\$321,148
February.....	200,090	832,760	1,021,657	56,454
March.....	155,090	1,275,896	875,827	69,572
April.....	330,000	650,779	736,027	70,948
May.....	*282,910	375,207	514,293	231,542
June.....	*14,902	671,808	196,516	231,610
July.....	94,073	480,462	+	190,078
August.....	348,870	507,945	*55,267	276,482
September.....	402,477	454,692	*132,707	306,408
October.....	706,821	538,396	*129,337	305,742
November.....	721,236	712,718	*708,253	430,158
December.....	865,835	979,157	*130,893	.....
Total.....	\$3,586,884	\$8,304,535	\$3,833,404	\$1,960,998

\* Loss. † Earnings just equal expenses.

What a picture this presents! The greatest traffic centre in the country gives business which has produced a profit of \$1,275,000 in one month, and a loss of \$321,000 in another month in which the traffic was larger. In the same year the net results vary from a profit of \$1,055,000 to a loss of \$130,000. In the first half of 1881 we have a profit of \$4,380,861; in the last half of the same year, with a larger traffic, a loss of \$556,457. In the first three years there was heavy traffic throughout, but in one of the years the profits were more than twice as great as the year before or the year after, and almost the only cause was railroad war. In the nature of things this traffic must fluctuate and the rates on it must fluctuate, and with these the earnings, and still more the profits; but such fluctuations in the profits as the above table shows are simply disgraceful. In 1879, in 1881, and in the first two or three months of 1882 millions of dollars were simply thrown away by the inability of the companies to do their business on business principles.

The small profits after the railroad war ceased this year were partly due to the war, because under the low rates produce was shipped in the fall and winter which otherwise would have been held till spring; but it was doubtless chiefly due to the bad harvest, which gave little to ship. And generally the small profits this year since March were due to natural causes. For the eleven months, it will be seen, they were much smaller than in either of the other three years, and but little more than a quarter of the profits in the corresponding period of 1880. There is good reason to expect, however, a profit of \$600,000 or more on the December business. Small profits which are due to short crops or other natural causes we need not be much concerned about: it is those which are chargeable to the foolishness of railroad managers that we should be ashamed of.

Seriously, is it not desirable in the interest of carriers and shippers alike that a policy should be followed which will prevent these tremendous artificial fluctuations in profits? This vast and important traffic should always pay a share of the interest on the capital invested in the railroads it uses. Sometimes it has done so liberally; at others the owners of the railroads or the local traffic has been made to contribute not only the whole of the interest, but a part of the expenses of moving the through traffic. Certainly a stop should be put to this. The co-operation of the railroads secured under the Joint Executive Committee has put a stop to it for the time. Only through it, or some similar system of co-operation, so far as we can see, can this desirable object be secured.

#### End of the St. Paul Railroad War.

Just as we go to press it is announced that the contending Northwestern railroads have reached a final settlement of their differences, and that rates were restored Thursday. The particulars, so far as they are known, will be found in our news columns. Generally, it may be said, the agreement provides simply for the strict maintenance of rates from Minneapolis and St. Paul, under penalties, but for no division of traffic. The Rock Island, which has been strong at Minneapolis through its control of the Minneapolis & St. Louis, has but recently got a good foot-hold in St. Paul, and is unwilling to have its share of the traffic there determined by its past success in obtaining it. It has never been in the St. Paul pool. After the expiration of the new agreement, at the end of 1883, there will be data on which to base a division.

It is not easy to make an agreement which will secure the maintenance of rates while the roads are competing for traffic; but the managers in this case are confident that theirs will be effective, and they have had experience with similar agreements in the West.

The question of "dividing territory" and the construction of new lines by one company which will compete with those of another, which Mr. Porter, in behalf of the St. Paul & Omaha, had made the principal issue, seems to have been dropped. We understand that all the companies were of the opinion that for some time, each in its own individual interest without regard to the effect on other companies, it will be

better not to do more construction work than is necessary to complete the lines now in operation, and the general opinion that it would be very unwise to attempt to limit the construction of new railroads by formal agreement doubtless had a great effect. So far as Mr. Porter is concerned, however, the fact that he did not press this point was very likely due to his knowledge that he did not, when the negotiations were closed, represent a majority of the shares. It is understood that while the contest was going on Mr. Vanderbilt made enough purchases of St. Paul & Omaha stock to give him and those acting with him a clear majority, and under those circumstances it was entirely proper that Mr. Porter should defer to the judgment of the chief owners of the road, whatever his own opinion might be. The final result, as indicated by the market prices of the stocks, is a great advantage to the St. Paul & Omaha Company—greater to it than to any other, as its shares sold after the settlement at higher prices than they have ever brought heretofore.

#### November Railroad Earnings.

November earnings so far reported show in the aggregate an important gain over last year.

In view of the railroad war raging among the trunk lines at this time last year and the poor crops of that year, it might be assumed that November was a bad month last year. But it was not. Not many of the roads which have a large trunk-line traffic reported then (or now), and while the poor crops were felt in diminished wheat and flour and cotton shipments in November, there were still large corn shipments from the crops of 1880, and local traffic and travel were very heavy. The result was that 56 roads reporting earnings, with an enormous increase of mileage, earned in November but \$8 per mile, 1.3 per cent., less in 1881 than in 1880.

This year the average earnings per mile of 60 roads reporting were \$539, against \$508 last year, an increase of 6 per cent.; indicating better earnings than in the exceptionally favorable year 1880 even. And of all the roads which have reported for both 1880 and 1882, 45 in number, all had larger total earnings this year except the Illinois Central, whose decrease from 1880 is but \$27,486, or 4½ per cent., in Illinois, and \$3,489, or 2 per cent., in Iowa. Several of these roads have smaller earnings per mile than in 1880, as some have enormously increased their mileage within the two years and so greatly "watered" their earnings, so to speak—sometimes greatly to their present advantage, as is the case wherever the addition to gross earnings is greater than the addition to working expenses and fixed charges on account of the added lines. Thus the Central Pacific's system worked has grown from 2,450 to 3,167 miles since November, 1880; the Chicago & Northwestern's from 2,720 to 3,464; the Chicago, Milwaukee & St. Paul's from 3,600 to 4,383; the St. Paul & Omaha's from 824 to 1,085; the Denver & Rio Grande's from 551 to 1,160; the Gulf, Colorado & Santa Fe's from 188 to 482; the Northern Pacific's from 722 to 1,419; the Manitoba's from 656 to 1,020; the Texas & Pacific's from 550 to 1,396; the Wabash's from 2,480 to 3,423; with smaller but still considerable increases by several other systems.

But these vast increases in mileage, chiefly by the construction of new road in new country where traffic was yet to be developed, have not always been followed by decrease in earnings per mile, by any means. These earnings per mile in November for several of the roads now reporting for the last three years have been:

	1880.	1881.	1882.
Burlington, Cedar Rapids & Northern.....	\$385	\$353	\$404
Central Iowa.....	507	407	43
Central Pacific.....	808	828	707
Chi. Mil. & St. Paul.....	409	397	473
Chicago & Northwestern.....	682	671	594
Chi. St. P. Minn. & Omaha.....	416	399	477
Denver & Rio Grande.....	741	542	442
Gulf, Col. & Santa Fe.....	403	411	591
Northern Pacific.....	417	489	5-6
St. Louis, Iron Mt. & Southern.....	923	978	1,34
St. Paul, Minn. & Manitoba.....	458	505	805
Texas & Pacific.....	568	376	444
Union Pacific.....	726	746	752
Wabash.....	456	407	413

This list includes only those roads that have had considerable additions to their mileage since 1880. Nine of the 14, it appears, had larger earnings per mile in November this year than in 1880—an exceptionally prosperous year, be it remembered, when all crops were excellent and business throughout the country good; and on three at least of the roads that have smaller earnings per mile this year, including the two most important ones, the lack of corn to carry this year is sufficient of itself to account for the decrease—that is, an important traffic on all their lines, or a great part of them, was so far reduced that we should expect to find a decrease in earnings per mile had there been no increase in mileage. We shall expect that the Wabash in December and the Chicago & North-



western and the Central Iowa in January will show important gains from the movement of this grain.

There is probably no one case where there has been an increase in earnings per mile, following a great addition of mileage, that the earnings per mile of the new lines have been anything like as great as those of the old ones. In many cases, however, a material increase in the earnings of the old lines has been due to the traffic interchanged with the old ones—as, for instance, the immigrants, supplies, lumber, agricultural implements, etc., going to the new lines of the Northwestern and the Milwaukee & St. Paul in Dakota (and to other companies, new roads there and in Northwestern Minnesota and Manitoba), and the farm products shipped thence, are likely to be carried over 400, 500 or 600 miles of the older lines of these companies, to and from Lake Michigan, so that the traffic, which may yield the new road but a dollar may produce ten dollars on the old road. But, aside from this, we have a general activity and growth of traffic on the several systems, to which chiefly, in most cases, doubtless, is due the increase in earnings per mile. Some of the companies began to extend their systems three or four years ago, and the lines then begun have had time to develop a considerable traffic of their own. But some of the large additions have not been new road, but old lines leased or consolidated, and these cannot be expected to develop so fast as new lines in new country. This has been very largely the case with the additions made by the Wabash and, to a much less extent, with those of the Milwaukee & St. Paul.

Going back to the separate roads that have reported for November so far, we find a slight decrease on the Central Pacific, in spite of a considerable increase in mileage; a great gain on the Chesapeake & Ohio, marking, doubtless, the beginning of its development of a trunk line business, though certainly largely due to local traffic; an increase of more than 60 per cent. on the Chicago & Grand Trunk, partly due, doubtless, larger or through traffic, much more so to higher through rates (fully twice as high as last year), but more still, we imagine, to a better local traffic. The failure of crops in Michigan last year was such as to reduce very greatly the earnings of all the Michigan roads, except the purely lumber and ore roads, and the Grand Trunk's local traffic is chiefly agricultural.

The Milwaukee & St. Paul has an increase of over one-third in the month and of 19 per cent. in earnings per mile, with five days of railroad war. In November the crop movement was likely to be as large as ever on nearly all its lines, probably, except that between Chicago and Council Bluffs, which will carry a great deal of corn when it is ready for shipping, and but little wheat. This line got in November its full share of the Omaha-Chicago through freight, but has not yet begun to carry through passengers and receive its share of that business in the pool. But there can be no doubt that this line—even the new part of it west of Cedar Rapids—will have considerably more than the average earnings per mile of the whole system. The Chicago & Northwestern had very little increase in total earnings, notwithstanding a considerable increase in mileage. This, as we have intimated above, may be explained by the very light corn movement so far this year, which will doubtless turn into a very heavy one when the corn of Central Iowa is ready to ship; but it is also partly due to the fact that its new lines are nearly all in new country, where traffic is little developed as yet. The Denver & Rio Grande has smaller total earnings than last year, in spite of an increase of 15 per cent. in mileage; but before we pronounce its earnings per mile "small" we should compare them with those it made previous to 1880. In successive years they have been:

1876.	1877.	1878.	1879.	1880.	1881.	1882.
\$243	\$267	\$351	\$387	\$741	\$542	\$442

In fact \$442 per mile for a new and cheap road in a mountain country, with scarcely any other industry than mining precious metals may be looked on as large rather than small earnings; a great many roads this side of the Missouri and the Mississippi even prosper tolerably on less; but, of course, here the question of fixed charges per mile and floating debt for construction may have everything to do with the situation.

The East Tennessee, Virginia & Georgia reports larger earnings per mile than before for several years; the Gulf, Colorado & Santa Fe makes a better showing than any other Texas road reporting, and a positively good showing, the earnings being about equal to the average of roads in this country, though the road is wholly new; but all the Texas roads show considerable gains, as was to be expected, all crops being fine there this year and miserable last year. And the two roads carrying from Texas—the

Iron Mountain and the Missouri, Kansas & Texas—share in this prosperity. The Chicago & Alton and the Hannibal & St. Joseph bear witness to the improvement in the traffic of the "Missouri River points," and on their lines and other lines southwest of Chicago, as does the Missouri Pacific, whose increase is more than 40 per cent. in the total and from \$692 to \$798 per mile of road. The Mobile & Ohio does better than in 1881 or 1880, but not so well as in 1879 and 1878. The New York & New England continues the increase it has shown for several months past; the Norfolk & Western earned \$571 per mile this year against \$506 last, which latter was more than ever before. The Northern Pacific has already larger earnings per mile than the average road, and increased them nearly 10 per cent. over last year, in spite of its larger mileage, the increase in which cannot have contributed much to earnings as yet. Concerning other important roads the table above and the comments on it give some information.

There is very little yet reported to indicate the course of trunk-line traffic, and there are many lines whose earnings will be given later and included in our table about the end of this month. But so far as reported the earnings show almost everywhere a very satisfactory traffic.

#### Monthly Rail Shipments from Chicago Since 1878.

Chicago rail shipments eastward during the month of November last show an increase over the previous month such as has seldom occurred, and brings them up to those of last year (when rates were but half as high), nearly up to those of 1880, and far above those of 1879, which was perhaps a more profitable November than any that had preceded it. The November shipments in successive years have been:

	1879.	1880.	1881.	1882.
Tons.....	168,274	219,840	216,506	215,079

In 1879 the rate was 35 cents per 100 lbs. (on flour and wheat) to New York the first eight days of the month and 40 cents afterwards; in 1880 it was 30 cents until the 23d and afterward 35 cents; in 1881 it was pretty much what the shipper chose to pay, perhaps averaging 12½ cents; this year it was 25 cents throughout the month.

Shipments are usually heavier in November than in earlier months after June, but in 1879 this was not the case, the 40-cent rate having apparently restricted shipments, which before seemed likely to keep the roads in a state of chronic blockade, there being at this season a great demand for cars for local traffic also.

The shipments in successive months of the past four years are given below:

	1879.	1880.	1881.	1882.
January.....	192,512	163,378	263,872	321,168
February.....	198,541	166,541	204,331	225,816
March.....	258,458	318,963	212,021	179,145
April.....	298,042	186,543	275,417	138,472
May.....	280,355	125,157	171,432	115,772
June.....	280,334	223,977	242,403	115,805
July.....	145,788	160,187	250,253	95,039
August.....	162,263	169,314	260,608	138,241
September.....	134,141	151,464	265,414	153,234
October.....	193,976	179,406	258,674	152,871
November.....	168,274	219,840	216,506	215,079
11 months.....	2,292,584	2,064,850	2,629,991	1,849,564
December.....	219,334	244,790	242,336	.....
Year.....	2,471,738	2,309,640	2,889,317	.....

In 1879 rates were low and irregular until sometime in August, going down from January to June, and being below cost most of the time; but in the fall they were well maintained and advanced earlier than usual—to 30 cents, Aug. 25; to 35 cents, Oct. 11, and to 40 cents Nov. 9, and held at the latter rate until March, 1880. This year we only reach 30 cents Dec. 1, and this is the lowest winter rate ever made except in consequence of a railroad war.

From August, 1879, until June, 1881, rates were generally maintained, except that there were considerable irregularities for the last two or three months—not, however, affecting traffic materially. Thence till last March there were only war-rates, varying from 15 down to 10 cents per 100 lbs., and on some shipments of flour being as low as 8 cents. It was to these extremely low rates that the extraordinary heavy traffic of the summer and fall of 1881 and the first two and a half months of this year was due; for the bad harvests had left the country with less than usual instead of more than usual to ship; but with rail rates lower than water rates the railroads took most of the shipments that otherwise would have gone by lake. The light shipments after March and until September this year were due to the fact that the West was drained of freight, and not to high rail rates; these rates were in fact the lowest ever regularly made for the summer season, and that they did not drive off traffic is proved by the fact that while they ruled lake shipments were unusually light.

The recovery after August was chiefly due to the large crop of wheat, that it was not greater was due to the fact that there was unusually little old corn to ship, and the good new crop was not fit to ship. It is just beginning to come forward, and may very likely make the winter movement larger than ever before except last year.

The final result for the year must show a material decrease in the Chicago shipments compared with those of either of the three previous years. For the eleven months, the shipments this year are 780,427 tons (29.6 per cent.) less than last year, 215,316 tons (14 per cent.) less than in 1880, and 443,020 tons (19.4 per cent.) less than in 1879.

Since August, however, the course this year has been by no means so unfavorable, as the following statement of the

shipments in the three fall months in successive years will show:

	1879.	1880.	1881.	1882.
Tons.....	490,391	550,770	740,504	520,555

Compared with 1881, there is a falling off 30 per cent., but as the rate last year was just about half that of this year the earnings from the freight must have been about at the rate of \$1,945 this year to every \$1,000 last year. Compared with the other two years, when rates were maintained, the shipments do not vary greatly—they were 5½ per cent. more than this year in 1880 and 5 per cent. less in 1879.

The traffic did not become actually large this year, however, until November, owing to the lack of corn for shipping. This lack is now being made good, and it will not be surprising if the December shipments are as large as or larger than in any previous December.

#### Record of New Railroad Construction.

This number of the *Railroad Gazette* contains information of the laying of track on new railroads as follows:

*Chicago & Atlantic*.—Completed by laying track near Rochester, Ind., on a gap of 9 miles.

*Markesan & Brandon*.—Completed from Brandon, Wis., west to Granite Quarry, 7 miles.

*Rochester & Pittsburgh*.—Track laid from Bradford, Pa., south to Howard's Crossing, 5 miles, and from Johnsonburg, Pa., south 15 miles.

*St. Paul, Minneapolis & Manitoba*.—A connecting branch has been completed from the Breckenridge Extension at Everest, Dak., northwest to Casselton, 3 miles.

*Valley, of Ohio*.—Extended southward to Wheeling Junction, O., 5 miles.

*Wisconsin Central*.—This company's *Milwaukee & Lake Winnebago* line is completed by laying track from a point ten miles south of Oshkosh, Wis., southward 30 miles.

This is a total of 74 miles of new railroad, making 9,648 miles thus far this year, against 7,601 miles reported at the corresponding time in 1881, 5,836 miles in 1880, 3,594 miles in 1879, 2,243 miles in 1878, 1,994 miles in 1877, 2,283 miles in 1876, 1,264 miles in 1875, 1,808 miles in 1874, 3,606 miles in 1873, and 7,065 miles in 1872. This year's mileage so far is more than one-fourth greater than that of 1881, and nearly eight times as great as that of 1875, when new construction was at its lowest point.

THE NORTHWESTERN LUMBER TRAFFIC probably takes advantage of the low rates of a railroad war more than any other business. The freight on lumber to places as far distant from the mills as Central Iowa, not to say the country beyond the Missouri River, is a very large proportion of its cost, though the rates be low, and the amount of lumber consumed in the treeless prairie country is enormous. The lumber is usually bought at the mills in Western Wisconsin, or at the towns on the Mississippi where logs rafted down from Wisconsin are sawed, or at the great lumber markets at Chicago, Milwaukee, etc., by the local lumber dealers, who are among the largest customers of the railroads, and who necessarily carry a heavy stock. When rates come down during a railroad war, these dealers are likely to lay in large stocks. At this time of the year, they may secure what they will require for the early spring trade, and have it seasoning during the winter, when the demand is light. The rates on lumber are more affected than anything else in the Northwest now, though this is a west-bound traffic, and rates are maintained on other west-bound freight. This is, however, a separate trouble of longer date than the others, and affecting a great many more roads. The St. Paul & Omaha road is peculiarly suited for distributing the lumber manufactured in Western Wisconsin to the west and southwest. The mills (many of them) are near its eastern end, and from them it extends quite directly southwestward to Sioux City and Omaha, crossing diagonally the east and west roads which can carry the lumber to Western Minnesota and Dakota, and the north and south roads which can carry southward to Iowa, Nebraska, Kansas, etc. The mills from which it carries are much farther west than those which supply Chicago and Milwaukee, and therefore nearer the consumers. The rates made by it have been a frequent cause of the breaking or reduction of the regular rates from Chicago and the mills on the Mississippi south of Wisconsin, and have affected the lumber rates as far east as Toledo, doubtless. The lumber traffic has usually been dealt with separately in the various combinations of the railroads, and has apparently been harder to manage than anything else there being trouble about it most of the time. This has been due more to the competition of the various producers, probably, than to that of the carriers. The mills at Saginaw shipping west by way of Toledo, those of the east coast of Lake Michigan, those of West Wisconsin and those at Dubuque, Clinton, Rock Island, etc., which saw logs floated down the Mississippi, may all compete for the supply of the country west of the Mississippi. If the Chicago lumbermen, who get their chief supplies from the east coast of Lake Michigan, find they are undersold in Omaha or Kansas City by the mills at Eau Claire, on the St. Paul & Omaha, and so much so that they cannot meet their prices without a loss, the Chicago railroads are in a manner compelled to reduce their rates, and this whether the low prices at which the Eau Claire lumber is offered is due to low rates of transportation or low cost to the manufacturer. That is, it is for the interest of the Chicago railroads to get lumber to carry west at a very low rate if they cannot get a higher one. Their cars come east full of grain and cattle and hogs; and most of them will go west empty if there are no shipments of lumber from Chicago. They will therefore accept



almost any rate on lumber, and find their advantage in it, rather than have the Chicago shipments seriously reduced. As in so many cases, the railroads are, as it were, forced into partnership with the merchants of the places which they serve, because loss of business to the merchants is also loss of business to the railroads. And the reduction of rates caused by the competition of the producers on different railroads can hardly be prevented by any co-operation of the railroads, when it is increased and aggravated by the rivalry of the railroads, that part of it, doubtless, may be remedied by their joint action.

A NEW CHICAGO DETROIT LINE will be made by the Grand Trunk, it is said, to take the place of the Michigan Central as a connection of the Great Western. The Grand Trunk already has a complete line, made by the Chicago & Grand Trunk from Chicago to Durand, 252½ miles, and the Detroit, Grand Haven & Milwaukee from Durand to Detroit, 67 miles, making a route 319½ miles long, against 284 by the Michigan Central Main Line, and 272 by its Air Line. But the Grand Trunk has made preparations for the purpose of extending its Michigan Air Line Branch from the Detroit & Milwaukee at Pontiac west by south 70 miles to Jackson. When the loan was made for the branch, only two or three weeks ago, nothing was said of any extension beyond Jackson; but it is now reported that it will be extended westward to a connection with the Chicago & Grand Trunk, which will require about 45 miles of road if it strikes it as far north as Battle Creek, and twice as much if it makes the connection as far south as Cassopolis, both of which places are reached by Michigan Central lines from Jackson. In this way a line from Chicago to Detroit would be made up as follows:

	Miles.
Chicago & Grand Trunk, Chicago to Battle Creek.....	175
Proposed road, Battle Creek to Jackson.....	45
Michigan Air Line extension, Jackson to Pontiac.....	70
Detroit & Milwaukee, Pontiac to Detroit.....	24
Total.....	314

The saving of 3½ miles in distance over the existing line by way of Durand is altogether too slight to justify the building of so much road; but the line can be made shorter by building from Jackson to Cassopolis, 90 miles, instead of from Jackson to Battle Creek, 45 miles. In that case the distance from Chicago to Jackson would be 202 miles, instead of 220 via Battle Creek, 209 by the Michigan Central's old line, and 197 by the Michigan Central's Air Line. In this way a line to Detroit 293 miles long would be made—26 miles longer than the Michigan Central, not 16 miles shorter, as has been reported in the newspapers.

If the traffic which the Michigan Central has interchanged with the Great Western could be preserved by making such a line, it would certainly pay to build it; but it is not easy to see how it can have much effect on this business. It is desirable for the Grand Trunk to get to Jackson, which is quite an important traffic centre; but to build 70 miles for that purpose from Pontiac seems a high price to pay for this advantage, the country on the line having no large towns, and being already fairly supplied with railroads. West of Jackson the case is still worse, the two lines of the Michigan Central, between which the Grand Trunk extension would probably be built, being less than 12 miles apart for more than two-thirds of the distance.

A line nearly as short as the shortest of these can be made by running over the Chicago & Grand Trunk from Chicago to Lansing, 223 miles, and thence over the Detroit, Lansing & Northern from Lansing to Detroit, 82 miles, making a line 305 miles long, more than 70 per cent. of which is controlled by the Grand Trunk.

THE EFFECT OF RAILROAD WARS ON FOREIGN CREDIT is well shown in a letter from Mr. John Taylor to the New York Evening Post, which we copy elsewhere. The fact which he quotes of the difference between the prices of American and English railroad stocks paying the same rate of dividend is significant and important. There is no question but that the possibility of railroad wars in this country, and their actual frequency, very greatly affects the credit of all American railroad companies, and virtually compels the community to pay a larger average rate of interest on the capital invested in railroads. Capital will not be invested in any business in which the profits are likely to be cut off altogether at any moment at the whim of any one or two business managers, unless there are chances of very large profits to counterbalance the chances of very large losses of the capital invested. The Englishman who will readily pay more than par for an English 5 per cent. railroad stock will not touch an American 6 per cent. stock at that price, though the chances for an improvement in the future are vastly greater for the American property. He knows that what he buys for 100 may in two weeks be worth but 85; and one of the qualities which most recommend a security is instant convertibility without loss. Railroad wars are, to be sure, not the only reason of the greater fluctuations in the prices of American stocks, but they are a chief one, and a removable one, and an evil of such magnitude that the community is justified in taking steps to compel the companies to take some other steps to settle their difficulties than a resort to a struggle which reduces the value of hundreds of millions of property other than that directly concerned in the struggle. Worse perhaps than the effect on the foreign investor is the effect of railroad wars on the home investor. It has made it dangerous for any, but very rich men, who can suffer large temporary losses and do not depend upon getting a regular return on their capital, to own railroad stocks, and so to a great extent makes the vast majority of the community feel that they have no interest in the prosperity of railroad business. We

all sympathize to some extent in the efforts our neighbors and acquaintances are making to get a living. If the wagon-maker fails or the tanner's business became unprofitable, we think it a misfortune, and we take some interest in it, because we have neighbors and friends, perhaps, who depend upon such business; but at present in many parts of the country in a large community scarcely one owner of railroad stocks can be found. The public looks upon stockholders as a small class of enormously wealthy men, with which it has nothing in common. Make shares subject only to the fluctuations incident to the nature of railroad business (which in a country like this are considerable), and they would become a favorite investment, and the shareholders of a railroad company would be very largely the people living along its road—a most desirable state of things at once for the community and for railroad property.

CHICAGO RAIL SHIPMENTS EASTWARD for the week ending Dec. 7 have been, for the last four years:

	1879.	1880.	1881.	1882.
Tons.....	40,939	59,203	50,708	2,970

The small figures for this year are due to the fact that all shipments from points west of Chicago billed before Dec. 1 at the old rate are not included; that is, the shipments are those only which were billed at the advanced rate. That the total shipments were very much larger is indicated by the fact, shown below, that the shipments billed at Chicago alone during the week ending Dec. 9 were 50,933 tons. Of late the total shipments have exceeded the shipments billed at Chicago by about 10,000 tons a week.

Of the 23,970 tons of shipments of the first week of December this year at the new rates the Chicago & Grand Trunk carried 15.3 per cent., the Michigan Central 27, the Lake Shore 16.8, the Fort Wayne 27.9, the Pan-handle 7.5, and the Baltimore & Ohio 5.5 per cent. Thus the two Vanderbilt roads together carried 43.8 per cent. of the whole, against the 44½ per cent. awarded them in the pool, and the two Pennsylvania roads had 35.4 per cent., against 35½ in the pool.

The shipments for seven successive weeks have been:

	Oct. 21.	Oct. 31.	Nov. 7.	Nov. 14.	Nov. 21.	Nov. 28.	Dec. 7.
Tons.....	33,580	34,041	43,032	44,721	64,411	57,306	23,970

For the week ending Dec. 9 the shipments billed at Chicago (not including those from points west billed through Chicago) were 50,933 tons this year, against 46,957 tons in the corresponding week of last year and 46,588 tons in the previous week of this year. As this week was after the advance in rates, the increase (nearly 10 per cent.) over the previous week is especially gratifying. The earnings from these shipments must have been about at the rate of \$131 last week, against \$100 in the last week of November, when the shipments were larger than in any previous week since February. Compared with the corresponding week of last year there is a decrease of but 1 per cent. (149 tons) in provisions, a decrease of 14½ per cent. (3,777 tons) in grain and an increase of 82½ per cent. (5,904 tons) in flour.

The New York Tribune, commenting on a statement that the railroads out of Chicago are some of them blocked by the pressure of traffic, argues that if so they must have lost greatly in capacity, because last January they carried a great deal more. This conclusion is not necessary. The figures which the Tribune gives are those for the shipments billed at Chicago only, which differ greatly from the total shipments from Chicago. It is true, however, that last January, and also in March of 1880, the total Chicago shipments were heavier than at any time since. It ought not to be necessary to point out, however, that the railroads from Chicago to the East are not engaged solely in carrying the Chicago traffic. They carry that and a great deal more other traffic. It is the total amount of traffic that has been crowding the railroads. About the time winter sets in there is a great deal of freight that shippers are anxious to hurry forward—potatoes, apples, hay and other produce—and this is mostly local traffic, and requires the use of cars for a relatively long time for loading, unloading and distribution. Thus the railroads may easily be blocked with traffic when the through business is not very heavy. Further, the trunk lines can have the use of a large part of the cars of their Western connections if the traffic on them is light. At this time of the year it is usually heavy. In midwinter and spring, if the grain has come forward freely in the fall, they may have many cars to spare, and enable the trunk lines to carry without difficulty what early in December they could not possibly handle.

There has been a very great increase of rolling stock of late years, but some at least of the trunk lines have not been able to get enough to accommodate the traffic offering of late. The fact is, the effect of the bad crops of 1881 on east-bound traffic has only begun to disappear, and the trunk lines to obtain their normal shipments.

THE EFFECT OF THE NORTHWESTERN RAILROAD WAR ON FREIGHT TRAFFIC we may now examine in the light of the receipts of flour and wheat at Chicago and Milwaukee or three weeks of the railroad war, compared with those one week before the war began. These have been as follows:

	Dec. 9.	Dec. 2.	Nov. 25.	Nov. 11.
Flour, bbls.:.....	155,904	134,489	132,402	114,802
Chicago.....	79,003	106,887	112,089	108,322
Milwaukee.....	235,000	244,376	245,091	243,124
Both.....	442,477	416,410	549,536	340,121
Wheat, bush.:.....	243,258	192,518	218,642	204,157
Chicago.....	655,735	608,928	708,178	1,044,278
Milwaukee.....	1,743,235	1,708,020	1,871,087	2,138,330
Both.....	1,743,235	1,708,020	1,871,087	2,138,330

The chief change last week was a considerable increase in

the flour receipts at Chicago, more than balanced by a large decrease at Milwaukee, so that the aggregate flour receipts of the two places were smaller than in either of the other three weeks. Flour receipts are much more affected by the railroad war than wheat receipts, as the chief flour receipts of these places are from the territory affected by the war, but usually not one third of the wheat receipts of Chicago. The wheat receipts of Milwaukee, however, are chiefly from that territory. They increased 50,740 bushels last week, but the decrease in Milwaukee flour receipts the same week was equivalent to 125,461 bushels.

On the whole, there are no signs here of any stimulation of the wheat and flour movement by the low rates of the railroad war. The flour receipts have not increased, and the wheat receipts are much less than before the war.

THE FLOUR AND GRAIN EXPORTS we have heretofore shown frequently, are not made in the same proportions from the same ports, by any means, but the only important flour exports are from New York and Boston, while wheat and corn go in very large quantities sometimes from Philadelphia, Baltimore and New Orleans. We may illustrate this by the November exports of grain and of flour separately from the four Eastern ports.

Of the receipts of grain and flour at the four Eastern ports during the month of November last, New York received 66.6 per cent., Baltimore 14.1, Boston 1.1, and Philadelphia 8.3 per cent., the total being 11,623,739 bushels; of the flour receipts, New York had 52.0 per cent., Boston 35.5, Baltimore 10.2, and Philadelphia 2.3 per cent.

Of the exports of these ports in November, 60.5 per cent. went from New York; 20.8 from Baltimore, 11 per cent. from Philadelphia, and 7.7 per cent. from Boston. New York's flour exports were equivalent to nearly twice its grain exports, while at Baltimore the grain exports were five times the flour exports. The effect of this extension of flour manufacture, therefore, is to increase the relative importance of Boston and New York.

THE WINTER HOG PACKING continues very light, the total from Nov. 1 to Nov. 29 in the Northwest being but 1,108,117, against 1,488,751 last year, which was itself a season of much less packing than usual. There is a decrease at every principal packing point this year except Kansas City. It is not safe to estimate the season by the packing of its first month, and the recent cold weather may stimulate the business; there is plenty of corn to fatten hogs, and prices are good, but the stock of hogs is not large. The exports of hog products in November were 24,795 tons this year, against 36,760 last, and last year they were remarkably light. There has been much said of government interference with exports to France and Germany, but the fact is we have not had our usual stock of provisions to spare, as may be known by the fact that while exports have fallen off immensely, prices are still high—made so by the home demand.

THE NEW YORK IMMIGRANT TRAFFIC will after this year be managed directly by the trunk lines, in a way to secure greater economy and harmony than heretofore. They will have in Castle Garden a joint agent, and also a ticket agent for each road, and no sales of immigrant tickets by outside agents will be permitted. Tickets will be sold only to bona fide immigrants, whose names are on the vessels' manifests. The commission, which formerly was 25 per cent., and since the agreement with the Western Trunk Lines Association has been 15 per cent., will be reduced to 5 per cent., and to not more than \$1 on any ticket, which will be allowed to the steamer lines selling orders for tickets in Europe. The joint agent will direct the distribution of the immigrants among the several roads.

"THE RAILROAD RIGHT OF PRIVATE COMBAT," an article which we copy from the editorial columns of the Chicago Tribune, we publish as one of the signs of the times, and one of the first signs that the public which is served by the railroads, as distinguished from the public of railroad investors, which has almost no influence in the West, is beginning to see that it has and does not gain by railroad wars, that the community is likely to suffer immensely from an undue multiplication of railroads, and that the owners as well as the users of railroads deserve to have their rights and interests protected by the law. Much that the Chicago Tribune says now we have been saying over and over for years, with few signs of any public recognition that the community suffered from and had an interest in preventing the evils we deprecated.

OCEAN RATES have been unusually high since November, though grain shipments have not been heavy. There is, however, a good deal of other freight going to Europe, but the chief cause of the high rates seems to be a scarcity of tonnage. As much as 8d. per bushel has been paid for grain by steam from New York to Liverpool, and Tuesday last the quotation was 7d. As flour is now a more important export than grain, the rate on it is perhaps more important, and a better indication of the course of rates. Tuesday, 3s. per barrel was the rate on flour. The wheat of which it was made would be carried, at 7d. per bushel, for 2s. 7½d. There is usually a greater difference in favor of wheat.

Historical Development of the Organization of the Pennsylvania Railroad.

The object of this paper is to give some facts in connection with the development of the organization of the Pennsylvania Railroad Company, to show how and by what



steps this organization became what it is, and, so far as may be, why these successive steps in the development were taken.

There is no subject about which young men in training for position seem more anxious for information than the division of authority and duty between the various offices which make up a railroad company. This anxiety is sometimes based upon the misconception that definite and formal division of duty is a necessity in a good organization, and accompanying this a delusive hope that a knowledge of similar positions and duties in other companies will define limits in one's own. It is true that in each railroad there is a natural grouping of duties because of a necessary connection between them, but excepting those of purely technical character, and even sometimes, as regards these, the most practical question about the duties of any position usually is, "Who is to fill it?" and especially is this true in those early years of an organization when natural capacity rather than special training makes up the main difference between officers, and to some extent it must always remain true as regards those more responsible positions which will be filled by men who will strengthen the organization by special capacity or experience rather than fit into any nicely divided set of responsibilities.

A preliminary statement of such common-place facts will prevent, it is hoped, misconception of what may be further said in stating the views of a variety of minds upon the other and more theoretical aspects of this question.

At the time of the issue of its charter the organization of the Pennsylvania Railroad Company consisted of S. V. Merrick, Esq., President; Geo. V. Bacon, Treasurer; J. Edgar Thomson, Chief Engineer, with assistant engineers. Herman Haupt, one of the assistant engineers, was, however, soon appointed Superintendent of Transportation; and for some time Mr. Thomson bore the additional title of General Superintendent.

In August, 1849, Mr. Merrick resigned the presidency, but continued a director of the company, and Mr. W. C. Patterson was elected to his office, the salary of \$5,000 continuing, notwithstanding an attempt to reduce it to \$3,000 (the salary of the President of the Baltimore & Ohio Railroad Company), on the ground that Mr. Patterson was not an engineer. This movement on the part of a minority of stockholders advocated the union of President and Chief Engineer in one person, and probably was one of the causes leading to Mr. Thomson's election to the presidency in 1853.

Previous to this date Mr. Haupt had assumed the full duties of General Superintendent, which however he resigned in the early part of 1852. It is very plain that while there had been no clear, definite division of duties, he had in some measure held a position of control over rates as well as over transportation, motive power, and perhaps, maintenance of way. He had advocated a policy which there is occasion even at the present day publicly to defend, namely "a uniform tariff of rates is not applicable to a business which is constant and fluctuating. There is one principle which can be assumed as a general one and of universal application, and that is, that changes must be made when circumstances require them; on no other, can the operations of a railroad be conducted with success."

The fact that Mr. Haupt could have been charged with insubordination indicates the looseness of the organization at this period. In 1853 he was appointed Chief Engineer of the company by Mr. Thomson.

The first printed "organization" bears date November, 1852. Its division of duties is as follows: Construction Department, under a Chief Engineer (Edward Miller); Transportation Department, under a "Superintendent" (Herman J. Lombaert), with four assistant superintendents: the first assuming charge of maintenance of way, the second motive power, the third becoming local superintendent at Pittsburgh, and the fourth assuming the same position at Harrisburg. The First Assistant Superintendent (known also as Resident Engineer), was located at Altoona; the Second Assistant Superintendent (Mr. Enoch Lewis) was also located at Altoona; and under him were the foremen of shops, and a "Car Inspector of the Pennsylvania Railroad." There were also a General Freight Agent, a General Ticket Agent and an Auditor, all responsible directly to the President. Under the Auditor was a "Clerk of Freight Department," in charge of freight accounts. Finally the Treasurer, in charge of the Treasurer's Department. The Vice President (Mr. Wm. B. Foster) signs the annual report with the President for the first time in 1854. In 1851 there is also the beginning, in the Superintendent's report, of that careful and thorough system of division of accounts for which the Pennsylvania road is so justly celebrated. No full and complete statement of this division, however, appeared in print until the second (in order) organization, issued in 1859; and it should be stated that this system of division, which has been extensively adopted throughout the United States, had its origin in a plan of accounts made for the Georgia Railroad by Mr. Thomson when its Engineer, and perfected by him and Mr. Lombaert at this period, still further improved as to minute details by later officers of the Pennsylvania Railroad Company. In 1858 (the company at this date had obtained control of the entire line now known as the Pennsylvania Railroad) the revised organization provides for a General Superintendent, four division superintendents, two resident engineers, in charge of maintenance of way, and a Master of Machinery in charge of motive power. The office of Controller is also created, and filled (he becomes also Auditor) by Mr. Lombaert, formerly Superintendent. In 1859 the "General Foreman of the Car Department" reports to the General Superintendent (Thos. A. Scott) as do also the resident engineers the Master of Machinery, and the Chief Engineer of the Canal Department.

\* Report of 1852.

For many years the title of Chief Engineer of the Pennsylvania Railroad appears to have been dropped; but in 1862 Mr. W. H. Wilson, who had been a Resident Engineer, filled this office, reporting to the General Superintendent.

At this time the organization of the Pennsylvania Railroad Company as it now exists began to take definite and fixed form; and we may with advantage point out its order of development as it has thus far taken place.

At the beginning of its affairs, we see very plainly the chaos of inexperienced control. It is always a delicate matter to discriminate as to relative merits in a disagreement after a period has elapsed; a study of facts has, however, left some impressions. President Merrick was a man not careful to use tact, but possessed of a stability of character and mind making him in a certain sense the corner stone of the movement resulting in the Pennsylvania Railroad. He was or had been engaged in the manufacture of fire engines, and his judgment in mechanical matters was highly valued, although his influence was more largely due to strong, pure character. To President Patterson, a man of like character and a thorough gentleman, was due part at least of the financial success of the undertaking, and to him may be given the credit of choosing the men who made the road successful. We may be mistaken, but have reason to believe that both Mr. Thomson, Mr. Scott and other successful men entered the service during Mr. Patterson's ascendancy.

The Chief Engineer and the General Superintendent are the working organization in the beginning, but their positions are not clearly defined; as practical men they do not hesitate to criticize the policy of their inexperienced superiors. The General Superintendent clearly sees, in the light of his every-day experience, the sound and necessary policy in which rates must be based, and states his views at length in his reports, although they are evidently opposed to the controlling policy of the company; it is the beginning of that practical control of experience in railroad affairs which exists throughout the world and must exist even when legislatures become railroad operators.

It must not be supposed that the change of officers was effected quite on the issues here presented. There was a party and a party conflict.

Nevertheless, we are inclined to believe that the question of practical experience as against inexperience had also a place which made it in some measure the principle involved. Mr. Patterson represented the party who suffered defeat which we believe to have been unfortunate for the road, not in the other party gaining ascendancy, but in the loss to it of influences of the very highest character.

Mr. Thomson was a man not without errors; but he possessed strong characteristics which, we are inclined to believe, developed the starting point of the road as an organization. He organizes the company, and makes this theoretical organization a fact by respecting the positions in which he places his subordinates.

It is not here asserted that so vigorous a mind, which perhaps more than any other has left an impress on this great railroad, did not control and often determine the policy of his officers in their various departments; but if he at times and to a limited extent did this, his policy was known through their acts. He would uphold a trusted officer to almost any degree, whatever this involved; and the strength of the Pennsylvania organization lies to-day in the development of the principle, that control must flow through the organization, reaching subordinates only by the acts and words of their own immediate officers. This principle begets official self-respect, harmony of action and freedom of consultation between officers of various grades; and has prevented that injurious *post mortem* weakness of organic cohesion often left by strong personalities in societies with which they have had to do. The admirable vitality of the principles embodied in the organization, the definite character of the influences which permeate it bear evidence of an origin in strong personal power; the continued progress and vigorous development of internal policy by the road, which have justly given it the title of "the only road having an organization," bear still stronger evidence to the conclusion that the early subordinate officers were supported rather than created by this influence. The test of strength on the part of any organization is what becomes of it, and what it becomes in its development by its first principles on the decease of its originators.

The various departments of the road group themselves in the course of their experience. Naturally, the general management of transportation controls both motive power and maintenance of way, and at first the heads of these departments are merely assistant superintendents.

The accounting department finds its head in an independent officer, as does also the department controlling rates. The Vice-President is the President's assistant in new enterprises, and in affairs involving relations with other roads. By the organization of 1833 (revised 1863) the First Vice-President continues these duties, but they are now clearly defined. A second vice-presidency is created in charge of the accounts of the company, and naturally develops into a care over finances. The President is given an assistant "who shall be an engineer," and who begins that part of the organization which we shall designate the President's staff. The Transportation Department undergoes fundamental changes. The duties of the General Superintendent are more clearly defined; and it falls to him to define the duties of the Chief Engineer, Superintendent of Motive Power and Machinery, and of the Assistant Superintendent. He is also empowered under the directions of the President to make special rates for local freight on the road and its branches.

\*Quoted from a well known officer of another road.

The Assistant Superintendent is placed in special charge and oversight of the distribution of rolling stock.

The organizations of these dates have small differences. About one point there appears to be change in the revised organization (1863) which is not made quite clear. In 1863 "Division superintendents shall on their respective divisions (subject to the direction and approval of the General Superintendent) exercise all the powers delegated by the organization to the General Superintendent, for the management of the road, its branches and connections, for the transportation of freight and passengers, including the movement of motive power employed thereon, whether engaged in the transportation of freight or passengers, or in the supply of food and material, etc." "They shall carry into effect such directions as the Superintendent of Motive Power and Machinery may give from time to time, in relation to the maintenance of the locomotives, cars, and other machinery of the company."

In 1866 division superintendents "exercise all the powers of the General Superintendent which are necessary for the proper management, oversight and control of the division, except such as have been committed by him to his three assistants, viz., the Chief Engineer, the Superintendent of Motive Power and Machinery, and the Assistant Superintendent, of which the division superintendents shall be kept informed by him"—no further definition of duties following.

The road is divided into three divisions, each in charge of a Division Superintendent, a Resident Engineer, and furnished with a repair shop in charge of a Master Mechanic; the Division Superintendent assuming all the powers of the General Superintendent necessary for proper management, oversight and control of his division, "except such as have been committed by him (General Superintendent) to his three assistants, namely, the Chief Engineer, the Superintendent of Motive Power and Machinery, and the Assistant Superintendent."

A like organization under a General Superintendent is established on the Philadelphia & Erie Railroad.

Previous to this date (1866) purchase of supplies appears to have been committed first to a clerk, then to a Supply Agent, both responsible to the General Superintendent; but a "Supplying Department" in charge of a Purchasing Agent is now created, which is to furnish supplies on order of the General Superintendent, or of such others only as he shall authorize.

The Purchasing Agent is located at Philadelphia, and under him, in charge of the storehouse, also located in Philadelphia, is a Head Keeper of Stores.

The General Freight Agent and the General Ticket Agent are independent officers, responsible to the President.

In the Accounting Department (under the Second Vice-President and Controller) are the Auditor, First Assistant Auditor in charge of accounts relating to the earnings of the Pennsylvania Railroad; the Third Assistant Auditor in similar charge of earnings of the Philadelphia & Erie Railroad; and the Second Assistant Auditor in charge of all disbursement accounts—whose signature is necessary previous to payment of any bill of whatever nature.

General orders from the Accounting Department are to be sent through the General Superintendent to the officers and agents of the Transportation Department, including station, freight and ticket agents.

A Legal Department is established by appointment of local solicitors for 11 districts on the Pennsylvania road, Philadelphia being one; and for four districts on the Philadelphia & Erie. These report to the Assistant Secretary.\*

Payment of wages to employés requires the signature of each to his pay-roll account. All other expenses are to be paid by a draft on the Treasurer.

"In the form of estimate or certificate, on which shall be copied the bills or the items for which payment is made from a certified bill from the foreman or other proper receiving officer, and from the contracting officer who shall certify that the articles were for the use of the company and purchased at the lowest cash rates—which certificates shall be endorsed by the head of the department for whose use the purchases were made, and shall have been examined and proved by the Second Assistant Auditor before being paid. When the amount of the pay-rolls and vouchers has been ascertained, a certificate of the same, signed by the Controller, shall be sent to the Treasurer, upon receipt of which certificate the Treasurer shall place the amount required to the credit of the Second Assistant Auditor. The amount thus placed to his credit shall be drawn by checks and vouchers of such amounts and at such times as may be necessary." \* \* \* "All instructions emanating from the board of directors or President in regard to the proper business of either of the departments shall be given through the head thereof."

"The appointment of all employés on the line of the road, not herein provided for, and the defining of their powers and duties, is hereby vested in the General Superintendent."

"The heads of the departments shall be held responsible for the good conduct of all employés in their respective departments, and shall have the power of dismissal when they think it for the interest of the company, reporting immediately the cause thereof to the board."

So much has been quoted because this organization fixes the form and states many principles of the company; it remains in the main necessary, in further statements, to note the changes which have come by the development of this organization, although at least one new and most important principle does not here appear.

The changes by the organization of 1869 and 1870 may be noted together. There are four vice-presidents; the first charged with relations with connecting lines; the second in charge of accounts; the third charged with finances of purchased and controlled lines; the fourth in charge of engineering questions.

The Engineering Department is established as an independent one in charge of a Chief Engineer of Construction and

\* Who afterward became General Solicitor.



Consulting Engineer of the Pennsylvania Railroad, located at Philadelphia.

The Engineer of Maintenance of Way remains as assistant to the General Superintendent, and is aided by five resident engineers, one on each division of the road. It is not stated, however, what are the relations of these assistants to the division superintendents. There is also appointed a Superintendent of Transportation responsible to the General Superintendent; a General Solicitor, as an independent officer, in charge of the Legal Department; and two "general agents" at, respectively, Pittsburgh and Philadelphia, responsible to both the General Superintendent and the First Vice-President.

In 1872, 1873 and 1874, the office of General Manager was created and defined.

As defined by the organization of 1874, this office is responsible to the Fourth Vice-President, who for the first time assumes control of both transportation and rates, no change we have noted involving a more important principle. Previous to 1878, except the President (taxed with a multitude of duties) no office of the company found its ambition and principal duty in earning not a revenue merely, but a profit, by rates. However it may have previously been on the Pennsylvania Railroad, it certainly would not be untrue of the entire country, to claim that rates were made by those who did not control and were not responsible for expenses of transportation.

Freight business cannot be conducted by a rule demanding a profit in every transaction; but to allow the entire business to be pushed to competitive prices by those who took no note of cost, and whose fixed ambition and attention was prejudiced by considerations involving "the future," was certainly an error. So far as the Pennsylvania road alone acted, this may not have been an important matter, since the policy of consultation was a check on all departments; but indirectly, as one of many roads, the Pennsylvania suffered from this undisciplined "hopefulness" which it, perhaps, was the first to correct formally. All wise things are not done of purpose; but nevertheless the soundest principles, on this as on other occasions, were incorporated into the organization by accidents of circumstance about which it is difficult to say whether the occasion only served a purpose, or a purpose took advantage of an occasion.

This remark is applicable to several facts of this period, as that the Purchasing Agent became an independent officer under the President, reporting to the Committee on Supplies of the Board, although consulting the General Manager on all purchases as matters of his department; and that a real estate officer (an experienced chief engineer of the company) was placed in charge of real-estate affairs. We pass over the detailed features of the organizations of these years, and of 1881, in order to describe fully the similar but more complete organization of the present year.

## General Railroad News.

### MEETINGS AND ANNOUNCEMENTS.

#### Meetings.

Meetings will be held as follows:

*Chicago & Lake Superior*, meeting to elect directors, at the Astor House in New York, Dec. 20. The meeting is called by a committee of stockholders.

*Cleveland & Pittsburgh*, annual meeting, in Cleveland, O., Jan. 3.

*Boston & Lowell*, annual meeting, at the passenger station in Boston, Jan. 3, at 10.30 a. m.

#### Dividends.

Dividends have been declared as follows:

*New York Central & Hudson River*, 2 per cent., quarterly, payable Jan. 15. Transfer books close Dec. 15.

*Oregon & Transcontinental Co.*, 1½ per cent., quarterly, payable Jan. 10. Transfer books close Dec. 21. This is the first dividend.

*Old Colony*, 3½ per cent., semi-annual, payable Jan. 1. Transfer books close Dec. 15.

*New York, Lackawanna & Western* (leased to Delaware, Lackawanna & Western), 1½ per cent., quarterly, payable Jan. 2. This is the first dividend under the lease.

*Lehigh Valley*, 2 per cent., quarterly, payable Jan. 15. Transfer books close Dec. 18.

*Western Union Telegraph*, 1½ per cent., quarterly, payable Jan. 15. Transfer books close Dec. 20.

*Manhattan*, 1½ per cent., quarterly, on first and second-preferred stocks, payable Jan. 2. Transfer books close Dec. 20.

#### Foreclosure Sales.

The *Marietta & Cincinnati* road was sold at Chillicothe, O., Dec. 9, under the decree of foreclosure of mortgage granted by the Ohio Court of Common Pleas, and was bought for \$4,375,000 by the committee representing the bondholders and other creditors. The purchasers paid the \$100,000 cash required by the terms of the sale, and will pay the balance when the sale is confirmed. The sale covers 27½ miles of road on which there were \$14,000,000 stock and \$20,000,000 mortgage bonds.

A plan of reorganization of the company has been adopted and signed by holders of about 95 per cent. of the securities. It has been heretofore so fully set forth that it is not necessary to repeat it here.

#### December Meeting of the Car-Builders' Club.

The December meeting will be held on Thursday evening Dec. 21, in the rooms No. 113 Liberty street, New York. The subject for consideration will be "Gauges for Measuring Screw-Cutting Tools and Standard Sizes of Bar-Iron." Specimen gauges will be exhibited by the Pratt & Whitney Company, and examples of screws cut in iron of varying diameters by Hoopes & Townsend, will be submitted to the meeting. A representative of the Harvey Manufacturing Company, will explain the features of the Harvey patent interchangeable and self-fitting nut, and will show specimens of the same. An interesting meeting may be expected and it is hoped that manufacturers of bar-iron will be present, and will explain how near to standard sizes it is practicable to roll iron.

**Western Association, General Passenger & Ticket Agents.**

This Association met in Indianapolis, Dec. 12, pursuant to adjournment. The question of the division of Pacific rates was taken up and the following resolution passed:

"Resolved, That the Secretary of the Association be in-

structed to notify the Pacific coast lines that on and after Jan. 1, 1883, all lines running east from Kansas City, Leavenworth, Atchison, St. Joseph, Pacific Junction and Council Bluffs, will demand their proper proportions of rates based on second class rates from said points to all points east thereof as their portions of through second and third or emigrant rates from the Pacific coast to all points east of the above-named points."

The question of theatrical rates was taken up and discussed, but no action was taken.

### ELECTIONS AND APPOINTMENTS.

**Alexandria & Fredericksburg.**—The following appointments have been made, to date from Dec. 1, 1882: John S. Wilson, General Freight Agent, with office at Philadelphia; Wm. H. Joyce, Division Freight Agent, with office at Baltimore.

**Allegheny Central.**—At the annual meeting in New York, Dec. 6, the following directors were chosen: A. N. Martin, F. B. Jenkins, H. A. V. Post, C. E. Kimball, C. C. Pomeroy, M. G. Post, H. L. Larned, A. J. Wellman, A. H. Mines, F. W. Higgins, M. F. Blair, Frank S. Smith, George C. Chapman. The directors subsequently organized by electing the following officers: President, Frank S. Smith; Vice-President, Archer N. Martin; Treasurer and Secretary, Charles E. Kimball.

**American Society of Civil Engineers.**—The following list of officers for the ensuing year has been prepared by the Nominating Committee and submitted to members to be voted on: President, Charles Paine; Vice-Presidents, Wm. H. Paine, Henry Flad; Secretary and Librarian, John Bogart; Treasurer, J. James R. Croes; directors, George S. Green, Jr., Joseph P. Davis, Wm. Metcalf, Wm. E. Merrill, Wm. G. Hamilton. Letter ballots must be sent in before Jan. 17 next, when the annual meeting of the Society will take place.

**Austin & Northwestern.**—Mr. A. L. Rhomborg has been appointed General Freight and Passenger Agent, with office in Austin, Texas.

**Baltimore & Ohio.**—At a meeting of the board in Baltimore, Dec. 13, Mr. John W. Garrett was unanimously re-elected President, then entering on his twenty-fifth consecutive year of service in that office. Mr. Garrett made a short address relative to the history and organization of the company.

The board elected Samuel Spencer Second Vice-President, to fill a vacancy, and chose Orland Smith Third Vice-President to succeed Mr. Spencer. Mr. Smith was formerly General Manager of the Columbus & Hocking Valley and the Columbus & Toledo roads.

**Baltimore & Potomac.**—The following appointments have been made, to date from Dec. 1: Mr. John S. Wilson, General Freight Agent, Philadelphia; Mr. Wm. H. Joyce, Division Freight Agent, Baltimore.

**Boston & Maine.**—At the annual meeting in Lawrence, Dec. 13, the following directors were chosen: Samuel E. Spring, Portland, Me.; Nathaniel W. Farwell, Lewiston, Me.; Amos Paul, South Newmarket, N. H.; Wm. S. Stevens, Dover, N. H.; Nathaniel G. White, Lawrence, Mass.; James R. Nichols, Haverhill, Mass.; George C. Lord, Newton, Mass.; Nathaniel J. Bradley, John Felt Osgood, Boston. There is no change from last year.

**Buffalo & Southwestern.**—This company has elected John F. Moulton, President; James Adams, Vice-President; W. S. Bissell, Secretary and Treasurer. The road is leased to the New York, Lake Erie & Western Company.

**California Southern.**—Mr. J. N. Victor has been appointed Superintendent, and will continue to act as General Freight and Passenger Agent also.

**Castle Garden Trunk Line Agency.**—The four trunk lines have appointed as Joint Agent at Castle Garden, to supervise the distribution of the immigrant traffic, Mr. H. J. Jackson, Secretary of the Board of Emigration and Superintendent of Castle Garden.

**Central Pacific.**—The following appointments have been made, taking effect Dec. 1: William McKenzie, Assistant General Master Mechanic; G. J. Turner, Assistant Master Car Builder; with headquarters at Sacramento, California.

**Chicago & Northwestern.**—The office of W. H. Fitch, Assistant Superintendent of the Madison Division has been transferred from Madison to Baraboo, Wis. Mr. R. A. Cowan has been appointed Master of Transportation, with office at Baraboo. Mr. George Wentworth is appointed Chief Train Dispatcher for the main line of the division, at Madison, and Mr. Joseph Daubner Train Dispatcher for the Montfort line.

**Cincinnati, Hamilton & Dayton.**—Mr. George S. Griscom is appointed General Superintendent of this road and its leased lines, with office in Cincinnati.

Mr. Griscom was formerly Superintendent of the Eastern Division of the Pittsburgh, Ft. Wayne & Chicago road. He left that road about a year ago, and was for a short time connected with the Pittsburgh, Chartiers & Youghiogheny, when he was appointed General Superintendent of the Chicago & Western Indiana.

**Delaware, Lackawanna & Western.**—Mr. A. Fell has been appointed General Western Agent, with office in Buffalo. He has been connected with the Blue Line for a number of years.

**Eastern.**—At the annual meeting in Boston, Dec. 13, the following directors were chosen: By the certificate-holders, George E. B. Jackson, Richard Olney, Jacob C. Rogers, Jonas S. French, Samuel C. Lawrence, George S. Morison; by the stockholders, John Cummings, Charles Houghton, Arthur Sewall. The board elected George E. B. Jackson, of Portland, President, in place of E. B. Phillips, who declined re-election.

**Hartford & Connecticut Valley.**—At the annual meeting in Hartford, Conn., Dec. 13, the following directors were chosen: Samuel Babcock, Wm. D. Bishop, Richard D. Hubbard, C. M. Pond, H. C. Robinson, D. C. Spencer, E. H. Trowbridge, George H. Watrous, Nathaniel Wheeler. The road is controlled by the New York, New Haven & Hartford Company.

**Humboldt Bay & Eel River.**—The directors of this new company are: A. A. Curtis, W. S. Gage, F. F. Low, John A. Paxton, James A. Rigby. Office in San Francisco.

**Indiana Pacific.**—The directors of this new company are: Samuel Fraree, R. A. Curran, William Sear, Charles D. Rippey, Hiram B. Stanley, Benjamin Yohn, Joel Hall, Oliver P. Johnson, H. M. Bicknell, A. M. Jackson, H. A. Shambaugh, John Thumma, George Lightcat, James A. Barnes, D. D. Snyder.

**Little Rock & Fort Smith.**—Mr. Horace G. Allis, is appointed Local Auditor, vice J. W. Gay, deceased. Mr. Allis

took charge of his office Dec. 7, 1882. All communications pertaining to the Auditor's Department should be addressed to Mr. Allis, at Little Rock, Ark.

**Missouri Pacific.**—Mr. H. A. Johnson, late contracting agent in St. Louis, has been appointed Assistant General Freight Agent in place of G. W. Cale, who has gone to the St. Louis & San Francisco.

**Mobile & Ohio.**—At the annual meeting in Mobile, Dec. 7, the directors nominated by the debenture-holders were formally elected, as follows: W. H. Pratt, Moses Waring, Henry Hall, Cornelius H. Clark, Adrian Iselin, Jr., Jacob Hays, August Belmont, Jr., W. H. Hays, James H. Fay, J. P. McMahon, E. L. Russell, A. L. Rives, W. Butler Duncan.

**New York & New England.**—The following circular from General Manager Felton is dated, Boston, Dec. 8:

"Hereafter, the management of the telegraph lines of this company will be placed under the charge of an officer, to be known as Superintendent of Telegraph. He will have charge of the operators, line repairers, electric signals, and everything pertaining to the Telegraph Department. He will be assisted on each division by the Chief Train Dispatcher, who will perform the duties of Chief Operator. The Superintendent of Telegraph will be subject to the general directions of the superintendents on their respective divisions, but will be responsible directly to the General Manager. Under this order, Mr. G. L. Lang, is appointed Superintendent of Telegraph, with headquarters at Boston."

Mr. Ross Kells is appointed Superintendent of Motive Power. Mr. Kells is known as a master mechanic of long experience, who has held responsible positions with credit. He was recently on the New York, Chicago & St. Louis, to which road he went from the Pittsburgh, Cincinnati & St. Louis.

**New York, Philadelphia & Norfolk.**—The officers of this company are: U. H. Painter, President; William Painter, Vice-President; M. H. Taylor, Secretary and Treasurer; J. L. Bates, Superintendent and General Passenger and Freight Agent.

**New York, Providence & Boston.**—At the annual meeting in Providence, Dec. 13, the following directors were chosen: Charles H. Salisbury, Providence, R. I.; Nathan F. Dixon, Westerly, R. I.; Henry Howard, Coventry, R. I.; A. S. Matthews, Stonington, Conn.; John A. Burnham, Boston; Samuel D. Babcock, D. S. Babcock, J. Boorman Johnston, George F. Miller, Edward Morgan, Henry Morgan, New York.

**Pennsylvania.**—Capt. John N. Abbey has been appointed Passenger Agent of the Middle District, just formed by consolidating the three passenger districts centering in Philadelphia, Harrisburg and Buffalo. The lines included are the company's New Jersey lines south of Maununka Chunk, New Brunswick and Sea Girt; Tuckerton Railroad; Philadelphia & Atlantic City; Camden & Atlantic; West Jersey; Philadelphia, Wilmington & Baltimore (north of Baltimore); Cumberland Valley; Shenandoah Valley; Hanover Junction, Hanover & Gettysburg; Northern Central Railroad (north of Baltimore) and branches; Philadelphia & Erie Railroad Division, between Sunbury and Williamsport, including Sunbury, Hazleton & Wilkesbarre and North & West Branch Railroad; Pennsylvania Railroad Division, Harrisburg and east thereof. In addition, Mr. Abbey will have charge of all ticket agencies in central and western New York.

**Pennsylvania, Slatington & New England.**—Mr. E. J. Fallon is appointed General Freight and Passenger Agent. He recently held the same position on the Cincinnati, Selina & Mobile road.

**Pittsburgh, Chartiers & Youghiogheny.**—The officers of this new road are as follows: J. E. Schwartz, President; R. T. Hill, Secretary and Auditor; Hazen Brown, Treasurer; Joseph Ramsey, Jr., General Manager; N. P. Ramsey, General Freight and Passenger Agent. General offices in Pittsburgh.

**Portland & Rochester.**—At the annual meeting in Portland, Me., Dec. 6, the following were elected directors: Samuel E. Spring, George C. Lord, William L. Putnam, Richard Olney, Nathan Webb, Stephen J. Young, George P. Wescott, Joseph S. Ricker, Charles McCarthy, Jr.; Clerk, William H. Conant.

**Providence & Springfield.**—At the annual meeting in Providence last week the old board was re-elected, as follows: Horace A. Kimball, Edward Pearce, Jr., John L. Ross, Wm. Tinkham, Providence, R. I.; James O. Inman, Albert L. Sayles, Paeoag, R. I.; Sydney Dillon, New York. The board re-elected Wm. Tinkham, President; Jabez C. Knight, clerk; E. W. Tinkham, Treasurer.

**Rhode Island & Massachusetts.**—At the annual meeting Dec. 13 the following directors were chosen: Jesse Boynton, A. B. Chace, James Chace, H. Conant, Darius Goff, G. S. Littlefield, E. K. Ray, J. G. Ray, J. P. Ray. The road is leased to the New York & New England Company.

**Richmond & Allegheny.**—At the annual meeting in Richmond, Dec. 12, the following directors were chosen: Deatur Astell, A. Y. Stokes, Charles E. Wortham, Richmond, Va.; Samuel Thomas, Columbus, O.; Wm. L. Scott, Erie, Pa.; Myron P. Bush, Buffalo, N. Y.; Wm. H. Barnum, Line Rock, Conn.; C. S. Brice, F. O. French, J. L. Humphreys, Lawrence Myers, Samuel Sneath, J. W. Simpson, New York.

**Richmond & Danville.**—At the annual meeting in Richmond, Va., Dec. 13, the following were chosen: President, A. S. Buford, Richmond; directors, John P. Branch, F. M. Logan, Richmond; W. Bayard Brown, Wm. P. Clyde, R. Baring Gould, Robert Harris, John A. Rutherford, F. B. Wallace, New York.

**Sabine & East Texas.**—Mr. A. T. Smith is appointed Superintendent in place of John B. Morford, resigned.

**St. Louis, Hannibal & Keokuk.**—Mr. W. W. Walker, formerly Vice-President, is now President and General Superintendent.

**St. Louis & San Francisco.**—The following circular has been issued by General Manager Rogers:

"Mr. T. E. Cassidy, on account of ill-health, has resigned the position of General Freight Agent of this company, and will be assigned other duties."

"Mr. George W. Cale has this day been appointed General Freight Agent of this company. All communications relating to the Freight Department should be addressed to him."

Mr. Cale was recently Assistant-General Freight Agent of the Missouri Pacific road.

**Syracuse, Binghamton & New York.**—At the annual meeting in Syracuse, N. Y., last week, the following directors were elected: Samuel Sloan, William E. Dodge, Percy R. Pyne, George Bliss, U. A. Murdock, E. F. Holden, Fred H. Gibbens, B. G. Clarke, Fred F. Chambers, W. K. Niver, M. Taylor Payne, Edgar Auchincloss, Arthur D. Chambers. The road is controlled by the Delaware, Lackawanna & Western Company.



## PERSONAL.

—Mr. H. C. Lowrie has been re-elected City Engineer of Denver, Col.

—Mr. Joseph A. Osgood has resigned his position as Chief Engineer of the California Southern road.

—It is reported that Mr. James C. Clarke, Vice-President of the Illinois Central Company, will shortly resign and devote his time to his private business.

—It has been reported that Mr. George H. Watrous would shortly resign his position as President of the New York, New Haven & Hartford Company, but Mr. Watrous himself denies the rumor.

—It is reported that Mr. A. C. Bird, General Freight Agent of the Wabash, St. Louis & Pacific, will shortly leave that road to take an important position on the Chicago, Milwaukee & St. Paul.

—Robert S. Crampton, for five years past Cashier and Paymaster of the Little Rock & Ft. Smith road, has been missing from Little Rock for a week, and his accounts are said to be about \$10,000 short.

—Mr. Charles C. Trowbridge, one of the oldest citizens of Detroit, and formerly President and Receiver of the Detroit & Milwaukee Company, will be 83 years old on Dec. 29 next, and a number of his fellow townsmen have tendered him a public dinner on that occasion.

—Governor-elect Cleveland of New York, has appointed as engineer in chief on his military staff, Mr. George S. Field, President of the Central Bridge Company, of Buffalo; and as Commissary-General of Subsistence, Mr. Austin Lathrop, of Corning, who is an extensive railroad contractor.

—Mr. Albert Hebbard, senior member of the Hebbard Car Spring Company, inventor of the Hebbard spring and originator of the open spiral spring system for railroad cars, died at his residence in Knoxville, Tenn., Dec. 9, in the sixty-third year of his age. His death was caused by paralysis of the brain.

—Mr. Ross Kells, Superintendent of Motive Power of the New York, Chicago & St. Louis road, has resigned, and will accept a similar position on the New York & New England. Mr. Kells was formerly on the Pittsburgh, Cincinnati & St. Louis, and went to the New York, Chicago & St. Louis a few months ago.

—Mr. John H. Morford has resigned his position as General Superintendent of the Sabine & East Texas road, which he assumed only for a time until the road should be completed and in working order. Mr. Morford returns to his position as Superintendent of Ferries for the Central Railroad, of New Jersey.

—Mr. T. E. Cassidy has resigned his position as General Freight Agent of the St. Louis & San Francisco road, on account of continued ill health. Mr. Cassidy began railroad-ing in England, but came to this country some 15 years ago, and served on the Erie, the Union Pacific, the Missouri, Kansas & Texas and the Missouri Pacific before going to the St. Louis & San Francisco four years ago.

—Sir Hugh Allan, for many years a prominent figure in Canadian commercial and political affairs, died at Edinburgh, Scotland, very suddenly on the morning of Dec. 9. He was chief owner of the Allan Line steamers running to Montreal, Portland and Baltimore, and was also largely interested in Canadian railways. He was prominently connected with the earlier history of the Canadian Pacific. For a number of years he had lived part of the year in Montreal and part at a house he owned near Edinburgh.

## TRAFFIC AND EARNINGS.

## The Northwestern Railroad War.

Another conference was held in New York, Dec. 8. The Omaha road was represented by President H. H. Porter, First Vice-President Benjamin Brewster and B. R. Bishop, a director; the Rock Island by Hugh Riddle, President, R. R. Cable, Vice-President and General Manager, and David Dows, Vice-President; the Northwestern by Albert Keep, President, Marvin Hughitt, Vice-President, and M. L. Sykes, Secretary; and the St. Paul by Alexander Mitchell, President, S. S. Merrill, General Manager, and T. Milbank, a director.

The discussion continued some time and was only closed by an adjournment, all the roads holding to their respective positions.

On the following day another meeting was held, when a committee consisting of the President of the Omaha and the general managers of the Rock Island, St. Paul and Northwestern roads was appointed to prepare a plan of settlement.

This committee held several meetings, but was unable to agree upon any plan, and so reported at a general meeting held Dec. 11. A proposition was then made to restore rates and leave all questions to be settled by arbitration, but it was not accepted. The committee was increased by the addition of Messrs. David Dows and Alexander Mitchell, and was continued.

At another meeting of the committee held Dec. 12 it was agreed to drop the territorial question which has been so troublesome. It is said that this was accomplished by a sort of general understanding that no more road was to be built by any of the contending parties, and the committee then proceeded to discuss the question of a division of traffic.

The final meeting was held on Dec. 13, when an agreement was made to restore rates at once and to maintain them in future. All the details of the agreement are not made public, but it is understood to be simply a contract to maintain rates for one year, restoring matters to very much the condition in which they were before the war began. It was agreed to impose a small fine for cutting rates, and to refer all disputed questions to the joint action of the general managers of the roads.

Orders were immediately telegraphed to restore rates, and the war ended as suddenly as it began. Nothing has really been settled by it, the territorial question having been dropped before the settlement was reached, and all troublesome questions having been, apparently, simply put aside for the present.

## Pacific Coast Passenger Rates.

A circular from the General Passenger Office of the Union Pacific Company announces that its lines are again open to passenger traffic to Los Angeles via Lathrop and points on the Central and Southern Pacific roads between Lathrop and Los Angeles. Rates to Los Angeles are from Omaha: First class, \$111.50; limited first-class, \$100; second-class, \$78; emigrant, \$47.50. To Newhall the rates are the same as to Los Angeles; to Goshen and Fresno the limited rates are the same, but unlimited first-class fare is \$110.20 to Goshen and \$107.85 to Fresno.

The company also announces that tickets will be sold at the same rates from Kansas City, Leavenworth and St. Joseph as from Omaha to all Central Pacific points, except

to points east of Battle Mountain, Nev., or reached by stage from Kelson, Utah. To those points first-class fare will be \$4 higher than from Omaha.

## Railroad Earnings.

Earnings for various periods are reported as follows:

Eleven months ending Nov 30:	1882.	1881.	Inc. or Dec.	P. c.
Bur. C. Rap. & No.	\$2,554,617	\$2,026,224	I.	\$528,393
Central Iowa	1,002,040	865,491	I.	136,549
Central Pacific	23,708,176	21,868,920	I.	1,839,256
Ches. & Ohio	3,068,739	2,497,839	I.	570,900
Chi. & Alton	7,466,024	6,910,928	I.	555,096
Chi. & Eastern Ill.	1,637,240	1,487,338	I.	149,902
Chi. & Gd. Trunk	2,044,526	1,423,302	I.	621,224
Chi., Mil. & St. P.	18,423,000	15,171,187	I.	3,251,813
Chi., St. P., Min. & O.	4,589,843	3,589,346	I.	1,010,497
Cleve., Akron & Col.	466,291	385,725	I.	80,566
Denver & Rio Gr.	5,981,700	5,563,396	I.	418,304
Net earnings	2,509,479	2,345,102	I.	164,377
Det., Lan. & No.	1,467,624	1,255,557	I.	212,067
Gulf, Col. & S. F.	1,387,466	920,118	I.	467,348
Ill. cen. Ill. lines	6,371,775	6,150,870	I.	220,905
Iowa lines	1,762,255	1,672,032	I.	90,403
Lake Erie & West.	1,352,552	1,268,455	I.	84,097
N. Y. & N. England	3,127,113	2,569,879	I.	557,234
Norfolk & Western	2,190,213	2,061,589	I.	128,624
Ohio Central	962,864	621,980	I.	340,884
St. L., A. & T. H. m. l.	1,282,096	1,327,868	D.	45,772
Belleville Line	797,746	681,832	I.	115,914
St. P. & Duluth	1,015,062	657,083	I.	357,979
St. P., Minn. & Man.	8,011,255	4,350,697	I.	3,660,558
Scioto Valley	493,254	403,154	I.	90,100
Tol., Cin. & St. L.	802,802	626,896	I.	175,906

Ten months ending Oct. 31:	1882.	1881.	Inc. or Dec.	P. c.
Bur. C. Rap. & No.	\$2,276,188	\$1,824,044	I.	\$452,144
Net earnings	784,027	490,951	I.	293,076
Chi. Bur. & Quincy	17,324,323	17,454,832	D.	130,509
Net earnings	8,290,685	8,064,661	D.	226,024
D. M. & Ft. Dodge	286,756	330,982	D.	44,226
Net earnings	80,529	15,709	I.	64,820
Louisv. & Nash.	10,552,731	9,125,360	I.	1,427,371
Net earnings	3,992,685	3,376,972	I.	615,713
Oregon Imp. Co.	2,801,908	.....	.....	.....
Net earnings	974,410	.....	.....	.....
West Jersey	968,092	801,714	I.	166,378
Net earnings	429,303	381,454	I.	47,849

Month of October:	1882.	1881.	Inc. or Dec.	P. c.
Central of Ga.	\$426,500	\$414,480	I.	\$12,020
Net earnings	241,346	188,550	I.	52,796
Chi. Br. & Quincy	2,270,444	2,031,001	I.	239,443
Net earnings	1,307,056	1,132,723	I.	174,333
Marq., H'n & Ont.	118,218	101,736	I.	16,482
Net earnings	61,934	66,298	D.	4,364
Oregon Imp. Co.	435,668	.....	.....	.....
Net earnings	153,556	.....	.....	.....

Month of November:	1882.	1881.	Inc. or Dec.	P. c.
Bur. C. Rap. & No.	\$278,429	\$202,180	I.	\$76,249
Central Iowa	91,353	91,573	I.	14,780
Central Pacific	2,242,000	2,297,971	D.	55,971
Ches. & Ohio	287,850	230,222	I.	57,628
Chi. & Alton	748,152	672,380	I.	75,772
Chi. & East. Ill.	162,018	134,473	I.	27,545
Chi., Mil. & St. P.	2,072,000	1,569,597	I.	502,403
Chi., St. P., M. & O.	517,595	392,921	I.	124,674
Cleve., Ak. & Col.	43,993	38,001	I.	5,992
Det., Lan. & No.	138,840	121,692	I.	17,148
E. Tenn., Va. & Ga.	394,237	324,381	I.	69,856
Evansv. & T. H.	59,445	51,889	I.	7,556
Gn. B. & St. P.	44,323	41,720	I.	2,603
Gulf, Col. & S. F.	244,597	131,425	I.	113,172
Ill. Cen. Ill. lines	579,419	572,459	I.	6,960
Iowa lines	172,725	164,678	I.	8,047
Lake Erie & W.	134,297	108,370	I.	25,927
Little Rock & F. S.	90,340	65,360	I.	24,980
Louisv. & Nash.	73,300	73,300	I.	0
L. R. Miss. R. & T.	44,910	32,036	I.	12,874
N. Y. & N. Eng.	276,184	246,764	I.	29,420
Norfolk & W'n.	246,468	228,995	I.	17,473
Ohio Central	103,403	81,935	I.	21,468
Ohio & Mississippi	421,161	343,793	I.	77,368
Ohio Southern	36,625	30,414	I.	6,211
St. L., A. & T. H.	133,630	105,506	I.	28,124
Main Line	72,410	64,280	I.	8,130
Belleville Line	127,928	78,282	I.	49,646
St. P. & Duluth	913,354	508,530	I.	404,824
Scioto Valley	46,266	43,802	I.	2,464
Tol., Cin. & St. L.	84,899	65,000	I.	19,899

First week in November:	1882.	1881.	Inc. or Dec.	P. c.
Denver & R. G.	\$119,600	\$157,000	D.	\$37,400
Long Island	41,214	34,372	I.	6,842

## Grain Movement.

For the week ending Dec. 2 receipts and shipments of grain of all kinds at the eight reporting Northwestern markets and receipts at the seven Atlantic ports have been, in bushels, for the past nine years:

Year.	Northwestern receipts.	Total.	By rail.	P. c.	Atlantic receipts.
1874	2,363,488	451,462	451,462	100.0	1,459,321
1875	2,196,292	1,147,092	1,147,092	100.0	1,762,818
1876	2,658,871	1,424,702	1,380,369	97.0	2,792,414
1877	2,196,702	1,131,280	808,068	70.4	3,283,165
1878	4,047,916	1,696,362	1,002,234	59.0	3,543,142
1879	4,170,956	1,366,546	1,139,425	83.4	5,418,024
1880	6,277,327	1,441,372	1,346,872	93.5	4,342,028
1881	3,462,209	2,162,303	1,835,233	85.0	2,716,486
1882	5,510,893	2,879,750	2,160,290	75.0	4,389,641

Thus the receipts of the Northwestern markets for the week were this year 60 per cent. more than in the corresponding week of last year, and equalled in no corresponding week except 1880. They were 644,000 bushels more than in the previous week of this year, and were the largest for four weeks.

The shipments of these markets were a third larger than last year, and have been exceeded in the corresponding week of no previous year. It was the last week of lake shipments and these were very small, though larger than in most corresponding weeks. The total shipments were the smallest since July, but there is always a falling off at this time, and this year it is much less than usual. The shipments down the Mississippi were 155,186 bushels, or 5.4 per cent. of the whole.

The Atlantic receipts for the week have been exceeded in no corresponding week except 1879, and were 60 per cent. more than last year. They were a little less than the week before, but, with that exception, were the largest for ten weeks.

Of the Northwestern receipts Chicago had 44.2 per cent.; St. Louis, 24.4; Milwaukee, 9.4; Peoria, 8.9; Duluth, 5.4; Toledo, 5.3; Detroit, 2.3, and Cleveland 0.1 per cent. Duluth appears again, for the second time in seven weeks, with large receipts; its reports are apparently made irregularly, and each to include all received since the last report. There will be hereafter no reason to send grain to Duluth, unless it is known that it will be held all winter. The gain over the previous week is at Duluth, St. Louis and Chicago. The gain is wholly in corn, of which the receipts have now become positively largest—larger in this week than in any corresponding week at least as far back as 1878, and 95 per cent. of it went to Chicago, St. Louis and Peoria.

Of the Atlantic receipts New York had 69.3 per cent.; Baltimore, 11.6; Boston, 7.6; Philadelphia, 6.4; New Orleans, 3; Montreal, 2, and Portland 0.1 per cent. There is nothing notable in the distribution, except that New York's proportion is unusually large. Corn does not make any such figure in the seaboard receipts as in the Northwestern receipts, a very large proportion of the latter being consumed

before it reaches the seaboard; but the receipts of wheat and flour are much larger at the seaboard than at the Northwestern markets. The stock of corn "in sight"—that is, in store at the various grain markets east and west—has increased from 4,067,000 bushels Nov. 11, to 6,460,000 Dec. 2; and nearly two thirds of the increase was in the last week. Only 1,587,000 of the corn in sight was east of Buffalo, which is a very light supply. At this time last year the stock in sight was 18,800,000 bushels; in 1880 it was 15,750,000.

The exports of the Atlantic ports in the week ending Dec. 2 were 1,455,491 bushels, of which 54.1 per cent. went from New York, 35.6 from Baltimore, 6.5 from Philadelphia, 3.4 from Boston, and 0.4 per cent. from New Orleans. The exports continue to be nearly all wheat.

For the week ending Dec. 6 the exports were 1,401,521 bushels of grain and 133,593 barrels of flour this year, against 1,891,384 bushels and 55,378 barrels in 1881, and 2,469,577 bushels and 189,999 barrels in 1880.

For the week ending Dec. 9 receipts and shipments at Chicago and Milwaukee were:

	Receipts.	1881.	Shipments.	1881.
Chicago	2,897,430	1,534,321	1,274,009	1,196,370
Milwaukee	576,264	384,655	256,317	117,637
Bth.	3,473,694	1,918,986	1,283,726	1,314,007

The receipts were thus 80 per cent. larger than last year, the shipments 1 1/2 per cent. smaller.

For the week ending Dec. 9 receipts at four Eastern ports have been, for three years:

Bushels:	New York.	Boston.	Phila.	Baltimore.	Total.
1882	1,678,728	378,015	274,850	695,782	3,027,375
1881	1,025,824	446,363	155,038	461,000	2,088,885
1880	1,566,661	304,774	756,100	963,461	3,626,016
P. c. of total:	55.4	12.5	9.1	23.0	100.0
1882	49.1	21.4	7.4	22.1	100.0
1880	43.2	8.5	20.9	27.4	100.0

Philadelphia and Baltimore together had 32.1 per cent. of the total this year, against 29.5 last year and 48.3 in 1880. Of the New York receipts 26,400 bushels (1.6 per cent.) were by canal this year, against 164,724 bushels (16 per cent.) last year, and none at all in 1880, when the canal closed unusually early. With the canal closed the percentage of New York falls off as usual.

## Colorado Passenger Rates.

Commissioner Daniels, of the Colorado pool, gives notice that from Jan. 1 the migrant rate between the Missouri River and Colorado points will be abolished. The only rates between the Missouri River and Colorado points will be, first-class, \$25; second-class, \$22, with 50 cents added for St. Joseph and Council Bluffs.

## Coal Movement.

Anthracite coal tonnages are reported as follows for the eleven months ending Dec. 2, the tonnage in each case being only that originating on the line to which it is credited:

	1882.	1881.	Inc. or Dec.	P. c.
Phila. & Reading	6,500,348	6,478,338	I.	22,010
No. Cen. Shamokin	1,138,210	927,200	I.	230,950
Summit Branch R. R.	.....	.....	.....	.....
Sunbury, Hazleton & Wilkesbarre	50,202	10,926	I.	39,276
Pennsylvania Canal	484,026	454,227	I.	29,799
Central of N. J., Lehigh Valley	4,180,548	4,141,469	I.	39,079
Delaware & N. Y.	5,477,957	5,283,928	I.	194,029
Pennsylvania & N. Y.	25,819,249	25,819,249	I.	0
Del. Lacka. & Western	4,225,237	3,980,033	I.	244,584
Del. & Hudson Canal Co.	3,336,973	3,347,307	D.	10,334
Pennsylvania Coal Co.	1,328,142	1,319,566	I.	8,576
State Line & Sullivan	58,933	60,377	D.	1,444
Total	26,979,825	26,100,763	I.	879,062

The total anthracite tonnage for the corresponding period for eight years has been as follows:

	Tons.	1878.	Tons.
1882	26,979,825	1878	16,152,525
1881	26,100,763	1877	1,821,378
1880	21,924,500	1876	16,086,187
1879	24,469,939	1875	15,085,720

This year's anthracite tonnage will probably be the largest on record. The usual stoppage of work for a week over the holidays will be made, and there is some talk of continuing it through the first week in January.



branches. Coke shipments this year have been limited only by the supply of cars available.

The coal tonnage of the Pennsylvania Railroad for the eleven months was as follows:

	1882.	1881.	Increase.	P. c.
Anthracite.....	1,041,182	1,363,102	278,080	20.4
Semi bituminous ...	3,239,282	2,749,935	489,347	17.8
Bituminous.....	2,681,700	2,009,558	672,142	33.4
Coke.....	2,635,091	2,153,396	481,695	22.4
Total.....	10,197,861	8,275,991	1,921,870	23.2

The tonnage for November (five weeks) was 1,135,804 tons. This is the heaviest tonnage reported for any month of the year. The average so far this year has been 212,455 tons per week.

Actual tonnage passing over the Pennsylvania & New York road for the fiscal year ending Nov. 30 was as follows:

	1882.	1881.	Decrease.	P. c.
Anthracite.....	1,176,937	1,103,057	73,880	6.7
Bituminous.....	3,110,055	2,419,551	690,504	28.6
Total.....	4,286,992	3,522,608	764,384	21.7

The larger part of the anthracite is received from the Lehigh Valley road; the decrease was chiefly in the last few weeks of the year. The bituminous coal comes chiefly from the Barclay and Long Valley mines.

Receipts of coal at Chicago for the seven months from May 1 to Nov. 30 were as follows:

	1882.	1881.	1882.	1881.
By lake.....	623,235	555,261	263,212	289,269
By rail.....	289,461	280,812	1,447,403	1,210,630
Total.....	912,696	836,073	1,710,615	1,499,900

Increase in anthracite (chiefly by lake), 96,614 tons, or 11.8 per cent.; increase in bituminous, 230,716 tons, or 15.6 per cent. The total receipts of both kinds this year were 2,923,311 tons, against 2,295,981 tons last year, an increase of 327,330 tons, or 14.3 per cent. Coke is included in bituminous coal.

Cumberland coal tonnage for the week ending Dec. 9 was 44,894 tons. The total tonnage this year to Dec. 9 was 1,397,397 tons.

#### Chicago-St. Louis Tickets.

The following circular is signed by W. H. Dixon, Commissioner, and by the general passenger agents of the Illinois Central, the Chicago & Alton and the Wabash, St. Louis & Pacific; it is dated Chicago, Dec. 7:

"The traffic in Chicago, in coupons Chicago to St. Louis, or through tickets from Eastern points to St. Louis, or to points south of St. Louis, on or east of the Mississippi River, via Chicago and St. Louis, has become so great an evil and is so seriously affecting our revenue, that we are compelled to notify you that not later than on and from Jan. 1 next we must positively require that you base all rates for such business on Chicago, for any class of passengers, whether ticketed singly, or in parties on a solid ticket, or otherwise. This applies to limited as well as unlimited tickets. On the business in question, of any class or limit, this notice establishes, on and from the 1st prox., an arbitrary proportion for our lines of \$8, Chicago to St. Louis proper, and full Chicago rates and proportions south of Chicago to all the other points indicated herein. This notice does not include points beyond St. Louis, in Missouri, Arkansas, Texas, nor west of these states; nor does it include excursion or tourist tickets to points south, which excursion or tourist tickets, however, must in every case be strictly of iron-clad contract.

"The evil from which we are suffering is so great, and the loss to our revenue is so serious, that we appeal to you on personal grounds, as a courtesy to ourselves and to our managers, who are exceedingly anxious about this, that you should remedy this evil at once, and not delay until the final date that we have fixed. If you will be good enough to do this for us, we will appreciate the courtesy, and endeavor to reciprocate in every way in our power."

At a meeting held in Chicago on Dec. 2, 1882, at which all the above lines were represented, an agreement was adopted, the following clauses of which are appended to the circular:

"1. That the circular printed on first page will be sent at once to all lines east of Chicago exchanging passenger traffic with us in Chicago, for St. Louis and the south.

"2. That the circular referred to in clause 1 be and is hereby adopted as the text of our agreement, as to proportions to be accepted by us from lines east of Chicago, and that no less proportions be accepted in any instance, under any circumstances. That on the business named in said circular, no lower proportions than those agreed to be accepted from Chicago, shall be accepted from any line, by the Illinois Central from Kensington. That the Chicago & Alton and Wabash, St. Louis & Pacific Rail roads shall always be at liberty to accept on solid business, the same proportions via Chicago, that the Illinois Central may accept via Kensington.

"3. That Mr. W. H. Dixon, Commissioner of the Western Trunk Lines Passenger Association, Secretary of the Chicago Railroad Association, and Secretary of the Western Association of General Passenger & Ticket Agents, is hereby appointed Commissioner for the purpose of seeing that this agreement is faithfully carried out. That the supervision of the Commissioner will extend only to this special business for St. Louis and points south of St. Louis, on or east of the Mississippi River, handed to us by lines east of Chicago. That on the request of one or more of us, he shall at any time examine the books and accounts of any one, or of all of our lines, in order to see that this agreement is being faithfully observed. That in order to enable him to perform this duty satisfactorily, he shall have unrestricted access to any books or accounts of our respective companies, and shall examine, under oath or otherwise, as he may be requested to do by any one or more of us, or as he may himself elect, any officer or employee of any of our companies.

"4. That any breach of this agreement, intentional or unintentional, shall subject the offending party or parties to a fine of double the full and correct proportion, which should have been obtained on the business, secured by such offending party or parties by such breach of agreement; and also, and in addition, the cost, if any, of arbitration. That so much of the fine so levied, as made up of double the full and correct proportion as aforesaid, shall be paid to the offending line or lines parties hereto. In the latter case, in which two lines are to receive the fines so levied, said fines shall be divided in equal proportions between them.

"5. That the Commissioner shall hear and decide all complaints under this agreement. That there shall be immediate compliance with his decisions, or an appeal taken at once to a board of arbitration of three general passenger or general ticket agents, to be selected by the Commissioner."

#### An Unprofitable Season for Lake Vessels.

The Chicago Tribune of Nov. 30, says: "To-day at noon marine insurance expires, and the season of navigation for the year 1882 virtually closes. The season on the whole has been the poorest, so far as freights are concerned, that has ever been experienced by vesselmen. Grain freights, lumber freights, iron-ore freights, coarse

freights—all have been so low that not one in twenty vessels have netted anything for their owners, and many have ended the season in debt. The season of 1882 opened about six weeks earlier than usual, and that was one of the causes of the season's dullness. The other causes were the comparative scarcity, or rather the high price, of grain at this port (most of the time it being higher than it could be sold for at New York); made so by the manipulation of the grain gamblers here; the strikes at the lumber manufacturing points, the strikes in the iron business, and last, but not least, an overabundance of tonnage. The day of small vessels is nearly over, especially sail vessels. Steam is rapidly taking the place of sails, and in a few years the carrying of grain by sailing vessels will be as rare as were steam grain-carriers twenty-five or thirty years ago. And what applies to the grain-carrying trade applies with equal force to the carrying of iron-ore and lumber. Speed and large tonnage is what is revolutionizing the carrying business of the great lakes, and the sooner vesselmen recognize this fact the better they will be off."

#### Effect of War Rates on Lumber Traffic.

The Northwestern Lumberman (Chicago) of Dec. 2, says: "The low freight rates to Missouri River points prevailing for a few days past have had some influence on shipments, and have tended to swell the volume beyond what would have actually gone forward if there had been no low rates. In consequence November makes a fair showing to the end—considerably better than indications promised during the first few days of the month. Of course the low rates have made but little difference with those whose trade is mostly this side of the Missouri, and such dealers express the opinion that trade has dropped off within the week, speaking for themselves only. But there is no question that a large amount of lumber has gone forward to Missouri River points and beyond, that otherwise would have remained in the yards here, and in that way has in a measure rounded out the season's shipments, drawn quite heavily on dry stocks, and thus has given a feeling of satisfaction to those who have a fair quantity of dry lumber on hand. The several yards in this city that have a chain of yards in Kansas and Nebraska, have taken the opportunity of extremely low rates to fill up the distant yards, and so accomplish the double purpose of cheap transportation and readiness for next season's trade.

"Some express the opinion that the low rates have done more hurt than good, by rushing a lot of lumber beyond the Missouri, both from this city and the Mississippi River markets, at the close of the season, when the current demand is likely to diminish; and thus the Kansas and Nebraska yards will have been loaded up with lumber that their owners cannot pay for till next spring's trade furnishes them the money. This will tend to check a steady, healthy demand from the West during the winter. The same men also say that the low rate has given dealers in this city no advantage over Mississippi River points, for a rate proportionately low has been given them. As a consequence the dealers and mill men on the big river have as assiduously unloaded to the westward as have Chicago men."

#### Southern Railway & Steamship Association.

General Commissioner Virgil Powers has issued a circular letter in which, after noting various railroad complications, he says: "I would urgently advise that some agreement be established, and a division of territory north be made on some line east of which western lines to take no business, and west of which eastern all-rail lines to take no western business or quote no rates into certain southern competitive territory. I would suggest a line from Pittsburgh through Buffalo, N. Y., as about a fair division, from which lines either way can do business on same rates, the eastern all-rail lines to quote no rates on business west of that line to competitive points south of Wilmington, on the coast, or Columbia, Greenville, Spartanburg, etc., in the interior, and east of Selma and Montgomery. I know that such an arrangement would result in the saving of a large amount of revenue that will otherwise be thrown away. These competitions over long, circuitous, all-rail routes with shorter rail lines result in but little if any good to anybody, but great harm to all.

"The competition between the Green Line and rail and water lines, via New York, Philadelphia and Baltimore, to Charleston, Savannah and other southern coast points is still unsettled. Recently I succeeded in getting the steamship companies running between New York, Philadelphia and Baltimore, and Charleston and Savannah, to pool the western business between themselves and maintain a fair local rate between the northern and southern ports on this western business, thus making the maintenance of rates as published more probable. The only certainty of maintenance of rates, however, to these southern coast points is the pooling of the business between the Green Line and rail and water lines, which I urge to be done as early as practicable, and that an effort be made to do so at this meeting.

"The completion of the East Tennessee, Virginia & Georgia Railroad from Rome to Macon opens up another competitor for business. Two unsuccessful efforts have been made to make a pool with them. At the last meeting it was agreed between the parties at interest that the present divisions stand until the meeting of the Association, when it was hoped that the general managers would agree upon equitable divisions. In the meantime, they were to take what business they could get on strictly maintained rates over the new line. I regret to see a general indisposition of representatives of competitive lines to take hold of, discuss, and arrange these divisions. If all parties are disposed to do right and accept fair proportions, a full and free discussion will generally result in making agreements; if not, the only fair alternative left is to refer the question to the board of arbitrators, who are disinterested, and will decide in accordance with their best judgment, and their decision should be cheerfully acquiesced in.

"The rates were materially less than the previous year, and the roads increased their merchandise rates from the East, taking effect the first of September, about 12 per cent., and attempted to make a like increase on cotton rates to the East; but it was found that, owing to the competition between steamship lines from Norfolk and Portsmouth, etc., and New York and Baltimore, etc., and the very low rail rates to Norfolk, West Point, etc., they could not be maintained, and they were consequently reduced to very little above last season's rates. Since the last annual meeting of our Association the northern trunk lines have made agreements, restored rates and pooled the business, which has for some months past resulted in the maintenance of fixed rates and will in the future result, so far as their lines are concerned, in maintaining agreed rates from the Northwest to Southern coast points.

"Statistics of business done by all lines from the West into and through Montgomery and Chattanooga to points south and east of those points, except that done by the Memphis & Charleston road, have been completed and show a falling off in tonnage of 12 1/2 per cent. There have been, and still are and ever will be, complaints as to maintenance and actual cutting of rates where the business is not pooled. The passenger business of the Northern trunk lines is now being pooled, or a record is being kept of that business with a view of its final division and differences of rates are used to bring about fair divisions."

#### THE SCRAP HEAP.

##### Locomotive Building.

The Richmond & Danville shops in Manchester have lately completed a new ten-wheel freight engine for the road, and are building another of the same class.

The Pittsburgh, Ft. Wayne & Chicago shops in Allegheny, Pa., are building three new freight engines for the road.

The Rogers Locomotive Works in Paterson, N. J., recently delivered two passenger engines with 16 by 24-in. cylinders and 6-ft. drivers to the Wilmington & Weldon road.

##### Car Notes.

The United States Rolling Stock Co. has finally closed a contract for a tract of 100 acres of the property of the Calumet & Chicago Canal & Dock Co., on which to erect its new shops. The property is accessible both by rail and water. The company purposes building extensive car shops, the plans for which are being prepared by Wilson Brothers & Co., of Philadelphia.

The Indianapolis Car Works have taken a contract to build 250 coal cars, to carry 20 tons each, for the Terre Haute & Indianapolis road.

The Gilbert Car Works in Buffalo last week turned out two baggage and mail cars for the Buffalo, New York & Philadelphia road.

The Jackson & Sharp Co., Wilmington, Del., has recently forwarded to the Chicago & Atlantic 6 passenger cars, 6 baggage and express cars, and 4 combination mail, baggage and smoking cars, and it has yet to deliver to this company 12 Eastlake passenger coaches. It has shipped two Wagner sleeping cars to the New York Central Sleeping Car Co., and has two more about ready to go forward.

The Pittsburgh, Ft. Wayne & Chicago shops in Allegheny, Pa., are building four first-class passenger and 24 freight cars for the road.

The American Brake Co., of St. Louis, has been reorganized. Capt. D. P. Slattery having bought a large interest in the stock. The officers now are: President, D. P. Slattery; Vice-President, John B. Gray; Secretary, E. B. Leigh; Superintendent, S. W. McMahon. The company owns the patents for the automatic upright freight car brake and a steam driver and tender brake. The reorganization brings additional capital into the concern.

##### Iron and Manufacturing Notes.

Mr. J. S. Mundy in Newark, N. J., is building a number of his hoisting engines of different sizes up to 40 horsepower. He has shipped a number to the Northern Pacific and has just completed a double-drum coal-hoisting engine for the New York Central & Hudson River road, the second engine of this class for the road. Orders include several for the United States government and from dock and bridge contractors in and about New York. Mr. Mundy informs us that one of the two suits he has pending with the Lidgerwood Co. has been decided in his favor, and in the other a decision will probably be given in March.

The Pennsylvania, the Boston & Albany, the Old Colony, the Fitchburg, the Providence & Worcester, and other roads have, it is stated, given up the wire-circuit system for electric signals and substituted the rail-circuit system as preferable.

The Bethlehem Iron Co. and the Pennsylvania Steel Co. have each taken a contract for 2,000 tons of steel rails for the Oregon Railway & Navigation Co. The price is not stated.

##### The Rail Market.

**Steel Rails.**—The market has been active and orders for over 40,000 tons have been placed at \$40 per ton at mill. It is said that one or two contracts have been made at \$39, but this is doubtful. Makers are, apparently, now beginning to believe that a large business can be depended on at \$40 per ton, and they do not seem discouraged by the prospect.

**Rail Fastenings.**—The market is quiet and unchanged, although the demand is lighter than for some time past.

##### No Use to Hurry.

I had often read of the slow speed made by southern railroad trains, but noticed nothing unusual until reaching Macon. The train pulled out at about 15 miles an hour, slowed down to 12, and the waits were long and tedious. Some of the crowd didn't seem to care if we never got there, but the drummer for a Philadelphia house took on terribly. He was blasting away when the conductor came along and inquired what ailed him.

"Why, I'll be left!" hotly exclaimed the drummer.

"Let's see. You go to Thomasville?"

"Yes, sir."

"You change cars at Smithville?"

"I ought to, but the train will be gone."

"Not a bit of it. That train is two hours behind time."

"Well, I'd rather wait in Smithville."

"You couldn't wait in that town two hours without being asked to drink some of the worst whisky ever made, and if you refused you'd have to fight."

"I could go to the hotel."

"Then you'd have to walk a mile in the sand. No bus comes down until our train whistles."

"I might drum up a customer."

"You couldn't drum nothing. The last Northern drummer in Smithville had to fly for his life."

"Couldn't I wait on the platform?"

"No, sir. There is no platform to wait on, and if there was, you'd be suspected of wanting to start a turpentine fire."

"Well, it's awful slow."

"What of it? The other train is still slower; no dinner can be had until we get there; there is nothing to see; the depot won't be open; you can't sell a paper of pins in the town; you can't get on to Thomasville; no one in the town plays poker; you can't find a decent cigar there, and from what I know of Smithville I can assure you that it has at least 30 citizens who would take a pop at you on general principles within six minutes of your landing there."

Soon after our speed was reduced to 10 miles an hour, but the drummer had nothing more to say.—*Detroit Free Press.*

##### Train Robbers in Texas.

A dispatch from Dallas, Tex., Dec. 6, says: "On account of the boldness of train robbers, and the fact that nearly all North and Northwest Texas towns are infested with numerous visitors and suspicious characters, the railroads are taking extraordinary precautions. Commencing to-day, all passenger and express trains on the Texas & Pacific will carry a strong force of state rangers between Fort Worth and El Paso. There are no captures yet of the robbers who attacked the Gulf, Colorado & Santa Fe train a few days ago, but it is well established that one of their number was mortally wounded in the fight and died next day near Cleburne, and was secretly buried by his comrades."

##### A Singular Accident.

A rather thrilling adventure occurred a short distance up the West Penn road this morning. The engineer of one of the early morning passenger trains coming into Allegheny, was looking out of his cab window back toward the end of his train which was booming along at its regular high speed.



The fireman was out ahead on the engine shining up some part of the locomotive. The latter was unaware that anything had happened to the train until it rattled over Pine Creek bridge, which is known to be rather unsafe, at least to cross at a high speed. It is therefore the custom to "slow up" in crossing it. Noticing that this necessary action had been ignored by the engineer, the fireman, somewhat alarmed by the strange neglect, passed back into the cab of the engine, where he found the engineer lying prone upon the floor of the little box in a semi-unconscious condition. The fireman assumed control of the engine at once, and in a few moments the engineer, upon coming to his senses, explained that he had been struck on the head by the "goose-neck" of a watering pipe which had been carelessly swung around so that it projected too close to the track. He had received a severe gash on the head and had been stunned by the shock and felled to the floor. Very few persons were the wiser of the mishap until some time after it had taken place.—*Pittsburgh Telegraph*, Dec. 11.

#### The Richmond & Danville Shops.

The Richmond & Danville Railroad Company has been steadily adding to the shops in Manchester during the past two years, until now they are the most extensive works of the kind in the South. A representative of the *State* visited these works yesterday, and was shown through the various buildings by Capt. R. D. Wade, the Superintendent of Motive Power, who has charge of the mechanical department of the Richmond & Danville Company, including the shops at Manchester, those at Company Shops in North Carolina, and the shops at Atlanta.

The writer was first taken to the round-house, where he was shown a new locomotive (No. 11) which had been finished this week, and which will go out on the road to-day. It is a heavy freight engine, and weighs 83,000 pounds (without the tender), being next to the largest size—the "Consolidation"—that is ever built. It has 10 wheels (six driving wheels) and its cylinders are 18 by 22 in. It has all the latest and best appliances, including extension smoke-box in front for gathering the sparks; the boiler is supplied by two injectors. The engine is well proportioned, and was wholly constructed in the Richmond & Danville shops, and reflects credit upon the skill of the machinists employed as well as upon the Superintendent of Motive Power, under whose direction the work was done. It is the largest engine ever built in the South, and is the first that the Richmond & Danville Company has built entire. Two engines were partly built in these shops before the war, and a good many have been overhauled and repaired in the past few years, but the one just finished is the first which could be called strictly a "home" engine.

It cost the company \$10,500, while \$14,000 would have been the price of one of similar size and style bought from a Northern manufacturer. And the local product very naturally has the advantage of being put together with more pains.

The writer was shown another new engine under way, which was about two-thirds done.

Right here we will correct a statement which has recently gone the rounds of the press, to-wit: That the Alabama Great Southern had recently constructed the first locomotive that had been built "from the bottom" in the South. Capt. Wade built two passenger engines complete in 1867 and 1868 in the shops of the North Carolina Railroad, one of which is now doing excellent service on the Danville road, making its 108 miles a day.

The Richmond & Danville Railroad Company has expended a large amount of money on new buildings and machinery in the past year. The improvements this year and last will cost about \$70,000, the following being some of the more important of them: Brick foundry, covering an area of 80 by 130 ft., with two wings 30 by 40 each, cost \$18,000; equipment for same, \$5,000; wood and machine shops, 75 by 130 ft., with two rooms 30 by 40, cost \$12,000; equipment for same, \$15,000; other shops, cost (about) \$12,500. In the foundry 28 car wheels are turned out daily and after this week the capacity will be 60 wheels a day.

The Danville Company of course build their own cars, and some of the most beautiful passenger coaches that have ever rolled over the rails have come from the Manchester shops. In the car erecting shops we were shown a new combination car ready for the paint.

Capt. Wade informed us that in addition to their regular work the Danville Company had turned out this fall for the Georgia Pacific road 50 box cars, 40 flat cars and 40 gondolas.

At the west end of the yard a tall wooden tower surmounted by a large tank 95 ft. from the ground is nearly finished. This is to supply the shops with water to be used in case of fire. Thirty fire plugs will be located through the yard, and as the tank is very high the pressure will be strong enough to throw a heavy stream of water.

In addition to the car works the company has a complete job printing office in the second story of one of the new buildings and does all or nearly all of its own printing.

Capt. Wade is ably assisted in his management of the shops by Master Mechanic Thomas W. Gentry.—*Richmond Va. State*, Dec. 7.

#### Steam Tramway.

The London *Engineering* gives the following note regarding the successful working of street railroads with steam power: "When, some six years ago, steam tramway engines were introduced on the Dewsbury, Batley & Bristol tramways, it was decided to retain the old rails, as used when the line was worked by horses. This permanent way has now lasted six years, and although not yet worn out, the directors have decided, on the score of economy, to replace it by Mr. George Tinswell's system of patent double-headed rails, weighing 72 lbs. per yard. The work has just been completed under the personal superintendence of the inventor. We may here mention that the Merryweather engines in use on this line are still giving excellent results, the fuel consumed being, in fact, 20 per cent. less than that previously reported, whilst repairs account is at its minimum. The directors of the North Staffordshire and other tramways are, we understand, making inquiries as to how it is this line is worked more economically than other English tramways. There is not the slightest doubt that these Merryweather engines, with locomotive boilers, consume far less fuel than engines having the old vertical type of boiler. In fact, this latter design of boiler was originally adopted by Merryweather & Sons in their first tram-engines (some of which were used for some time in Paris), but abandoned on account of its enormous consumption of fuel and their aptitude for throwing sparks into the carriages of the passers-by on the high road."

The same paper also gives the following note with reference to a recent book on an analogous subject:

"*Railways on Roads*.—A work entitled 'Les Tramways et les Chemins de fer sur Routes' has just been published at Paris. A German paper says it is the most complete treatise on the subject which has hitherto appeared. It gives some practical suggestions as to the coefficient of resistance to traction on tramways. Steam cars for roads are described, viz., Baldwin, Todd, Ransom, Gruns, Grantham, Rowan, Brunner, Ferret and Belpaire. Among the locomotives are those of Brown, of Winterthur, that of Mallet, the com-

pressed air engine of Mekarski (which does not seem to have fulfilled expectations), and the grateless machine of Franco, etc."

#### Wrought-Iron Railroad Wheels.

The London *Engineer* says: "Messrs. Van der Zyphe Bros., of Deutz, near Cologne, Germany, who employ 120 men in the smithy, are turning out railway wheels by the hydraulic press at the rate of 15,000 a year, finished and mounted, for Germany, Russia, Italy, Turkey and Australia. The spring ring is generally used for fixing the tire, and it is exclusively adopted by the German government. The firm is now giving special attention to the manufacture of a railway carriage wheel like the Mansell, but of compressed paper, which is found to give good results."

#### An Unpleasant Traveling Companion.

The passengers in the smoking-car of the Pennsylvania Railroad train which left Jersey City yesterday afternoon at 5.30 o'clock, were somewhat annoyed between Princeton Junction and Trenton by the smothered howling of a dog, whose whereabouts for a time appeared to be a mystery. On the fifth seat from the rear door was seated a stolid-looking German and an Irish woman, who, from the manner in which she occasionally berated her companion, was presumably his wife. The shrill yelps and barks came from the vicinity of the legs of the oddly-mated couple. The noises seemed to come from an animal in the greatest distress or on the verge of hydrophobia. A nervous-looking, undersized gentleman, wearing a light overcoat, became so excited over the continuous howling that, urged by the looks and gestures of half a dozen other passengers, he started to investigate. He walked down the aisle unsteadily, stopped at the side of the German and leaning over him looked on the floor at the man's feet. He saw a carpet-bag there, and as he looked he saw it move and heard another wild "Wow-ow-ow!" come from its bowels. The dog was in the bag. To put a stop to the annoyance the gentleman in the light overcoat kindly requested that the animal might be freed, and after a little grumbling the woman consented. The hasp was unlocked, and in another instant a vicious little brute of a dog, with frothing mouth and glaring eyeballs, was on the floor, yelping louder than ever. The gentleman in the light overcoat, believing the dog to be mad, darted down the aisle as rapidly as the motion of the car would allow. The dog followed at his heels, and nipped him in the calf. The gentleman let out a yell and dropped on a seat. The other passengers jumped to their feet and called on each other to shoot the dog; to brain it; to throw it out of the car window. None of these suggestions were adopted. The dog was still barking at the gentleman in the light overcoat and trying to get at his legs. The coat had been removed and had been twisted into a sort of pliable club with which the man was trying to keep off his four-footed assailant. He leaned forward, and as he did so the dog grabbed the tail of his coat with his teeth. The nervous gentleman was just nicely balanced on the edge of the seat, and the sudden jerk caused him to lose his equilibrium. He pitched forward and fell on the dog. The Irish woman rushed forward to rescue her pet. She caught it up in her arms and ran back to her seat.

By this time the car was all excitement. There was every evidence that the dog was mad. Great flecks of foam fell from its jaws, and its teeth snapped together viciously, but the Irish woman held on fearlessly. "It's a pack of idjits yez are," said she, vainly endeavoring to thrust the snarling brute back into the bag, "til think me own darlint was mad. It's playin' he is wid yez."

The car with its excited load of passengers had then reached Trenton. During the five minutes that the consternation prevailed the German sat quietly smoking a long-stemmed pipe, but when the cars stopped he arose. He seized the dog by the back of the neck. "I think," said he, "dot I gif him some fresh air, auf nobody doud gare. I guess I dake him out," and suiting the action to the word he walked to the car door, opened it, and flung the animal 20 yards over the railroad tracks. The dog out of the way, the passengers were better able to hear the magnificent family quarrel which raged without interruption until the train reached Philadelphia.—*Philadelphia Press*.

#### Attempt at Train Robbery.

A dispatch from Dallas, Tex., Dec. 2, says: "Last night between 9 and 10 o'clock the north-bound express train on the Gulf, Colorado & Santa Fe Railroad, due at Dallas at midnight, stopped for water at a little station called Blum, about 75 miles south of Dallas. The engine was boarded by three heavily armed men, who, with leveled six-shooters, commanded the engineer to pull out, and 'Be in a hurry about it,' a mandate which, under the circumstances, he speedily complied with. After leaving the town in the rear two or three miles, the order was given to slow down, and as the train was proceeding the pilot struck and exploded a torpedo, which had been placed on the track as a signal to a half dozen confederates hidden in the brush that everything was in readiness for the consummation of the plot to go through the train. The explosion had the effect not only of drawing the confederates out of cover, but of arousing the attention of the guard in the express car, who, observing several men approaching the train, promptly opened fire on them, hearing which the robbers in the car jumped to the ground and ran towards their companions, at whom by this time the guard was blazing away most energetically. The robbers opened fire on the guard, about 75 shots being exchanged. The engineer pulled the throttle wide open and the train sped away, leaving the discomfited freebooters.

"The road had been expecting an attack for a week and had taken the precaution to guard against it. No one on the train was injured, but it is thought several of the robbers were hit. Officers were put in pursuit this morning, and there is an unconfirmed report to-night that two of the highwaymen were captured near Marion this evening. The railroad officials are endeavoring to ferret out the highwaymen."

#### The Wenger Air Brake.

A commission of French engineers was appointed to examine and report a new air brake invented by a Mr. Wenger, which has been used on a train between Paris and Etampes for some months. The commission found the brake to have some good qualities, but say that the results so far, though not sufficient to justify forming a definite conclusion relative to its value, show at least that it deserves further investigation. It sums up by saying that the brake has worked well on a train of 10 to 12 cars and seems worthy of more encouragement, and that it would be very interesting to make more extended experiments with the system, with modifications and improvements which the inventor has proposed, with trains which may sometimes include 24 cars.

#### OLD AND NEW ROADS.

Atlantic & Pacific.—Contracts are now being let for the extension of the Central Division westward from the present terminus on the Arkansas River in the Indian Territory. The original survey of the road has been materially changed. The new route just adopted follows up the red fork, and enters the Oklahoma lands at the northeast corner

of the Sac and Fox reservations, six miles north of the thirty-sixth parallel of latitude; thence bears south and west until it reaches the north fork of the Canadian River, which it follows westward until it reaches a point on the river six miles south of the thirty-sixth degree of latitude, when it strikes for the south fork of the Canadian, and follows that to the Texas Pan-Handle. The object in changing the route from the original survey through the unoccupied Cherokee lands lying west of the reservations of the Pawnees and Osages is to secure the alternate sections of land under the provisions of its charter granted by Congress in 1866 lying in the Public Lands District, or what is known as the Oklahoma district.

Baja California & Sonora.—Work on this road was begun Dec. 7 at Tia Juana, where the line crosses from California into the Mexican state of Baja (Lower) California. The road is to run from San Diego, Cal., eastward to Calabasas, Arizona, only a few miles on each end being in the United States, the rest in Mexico, south of and generally parallel to the boundary line.

Bangor & Portland.—It is reported that this company is to be consolidated with the Pennsylvania, Slatington & New England, with whose unfinished road it connects at Portland, Pa., on the Delaware.

Buffalo, New York & Philadelphia.—This company is adding a paint shop 145 by 50 ft. in size, to its car shops in Buffalo, the increase in business requiring it.

Buffalo, Pittsburgh & Western.—This company contemplates, it is said, an extension eastward, as soon as the new road from Salamanca, N. Y., to Olean, is completed. The new road required will be only from Belfast to Angelica, about 6 miles, and from Swains to Perkinsville, 10 miles, the rest being made up by the use of the Rochester & Pittsburgh and the Allegheny Central tracks. At Perkinsville connection will be made with the New York, Lackawanna & Western road east.

Cedar Rapids & Clinton.—This company has filed articles of incorporation in Iowa for the purpose of buying and completing the old Chicago, Clinton & Western road, whose unfinished line is now owned by the Burlington, Cedar Rapids & Northern Company.

Chicago & Atlantic.—The last rail on this road was laid near Rochester, Ind., Dec. 9, completing the line of 249 miles from Marion, O., to Hammond, whence entrance into Chicago is had over the Chicago & Western Indiana tracks. Some ballasting and finishing remain to be done, and no time has yet been set for opening the road for traffic.

The road, as is generally known, has been built to give the Erie and the New York, Pennsylvania & Ohio a Chicago connection of their own, and it will be worked in the interest of the Erie road, completing its line to Chicago, and placing it in that respect on an equality with the other trunk lines.

Chicago, Burlington & Quincy.—A dispatch from Sterling, Ill., Dec. 5, says: "A railroad excitement which has gradually increased during the last ten days culminated last night in the City Council granting the right of way to the Chicago, Burlington & Quincy road along Depot and Second streets from a point near the Northwestern depot to Market street, a distance of about half a mile, where they cross Rock River, connecting with a branch direct to Chicago. This makes a continuous and the shortest line from Rock Island, Moline and Davenport to Chicago by 21 miles and will result in lively competition with the Chicago, Rock Island & Pacific. Over \$100,000 has been paid for property along the right of way within ten days and work will commence at once removing buildings, grading, tracklaying and bridge building.

Chicago & Eastern Illinois.—The Chicago, Danville & Vincennes foreclosure case, as remanded from the Supreme Court, came up in the United States Circuit Court in Chicago last week. The Court granted leave to amend the supplemental bill so as to make the Chicago & Eastern Illinois Company a party defendant, and that company thereupon filed an answer to the bill and also a cross-bill.

Chicago & Grand Trunk.—It is said that this company will build a branch from Battle Creek, Mich., by South Lyons to Detroit. This will give the company a line from Chicago to Detroit about the same length as the Michigan Central.

Chicago, Milwaukee & St. Paul.—The track is now laid on the extension of the Turkey River Branch from Wadena, Ia., to West Union, 13 miles. The branch is now 57 miles long from the junction with the Dubuque Division. Trains will run to West Union in a few days.

Cleveland, Tuscarawas Valley & Wheeling.—The United States Circuit Court in Cleveland, O., has granted a decree of foreclosure and sale against this road at suit of the Union Trust Company, of New York, trustee. The road extends from Lorain, O., to West Wheeling, 158½ miles, and is chiefly a coal road; it has a bonded debt of \$4,252,000, on which interest has been in default several years, with the exception of \$700,000 preferred first-mortgage bonds. The road will be sold as soon as the required legal notice can be given.

Collinwood Belt.—This company has been organized to build a connection between the Lake Shore and the New York, Chicago & St. Louis roads, just east of Cleveland.

Columbus, Chicago & Indiana Central.—Holders of consolidated first-mortgage bonds, income bonds and stock, and also of Union Trust Company supplementary or other certificates, issued for first-mortgage bonds, who have subscribed the agreement for the reorganization of the company, are notified that, in accordance with the provisions of the agreement, they are required forthwith to deposit the bonds, stock and certificates with the Union Trust Company, at its office, No. 73 Broadway, New York City; and at the same time holders of income bonds and capital stock who have thus subscribed the agreement must pay the assessment of 10 per cent. on the par value of the income bonds, and 5 per cent. on each share of stock, to the Purchasing Committee, at the office of the Trust Company. The last day allowed for making such deposit and payment will be Dec. 27, 1882. Purchasing Committee's receipts, admissible at the New York Stock Exchange, are ready for delivery.

The late committee representing the holders of consolidated first-mortgage bonds deposited under agreements of May 17 and Aug. 22, 1879, will pay a cash dividend of \$25.13 upon each certificate for a bond for \$1,000 deposited under such agreements upon presentation of such certificate at the office of the Union Trust Company on or after Dec. 13 inst., a statement of the fact of such payment to be stamped upon the certificate. This dividend is of a balance in the committee's hands arising from sale of certain income bonds which they received in the course of their proceedings for reducing the railway company's debt for compliance with Judge Harlan's decree.

The minimum price fixed in the decree of foreclosure at which the road can be sold is \$18,500,000.



**Danville, Olney & Ohio River.**—In Boston, Dec. 7, a large majority of the bondholders met at the call of the trustees. The trustees stated that the road is now in the hands of a receiver, Judge Eads, who has obtained permission from the United States Circuit Court of the Southern District of Illinois to lease the property, to be operated by another corporation. The trustees made a detailed report of the condition of the road, expressing the opinion that, with the expenditure of about \$30,000, the property could be placed in condition to be profitably operated. The Receiver, however, gives it as his opinion that at least \$100,000 will be needed. A vote was unanimously passed requesting the Receiver to put the road in a condition to operate it, and protesting against the leasing of the property on any conditions whatever.

**Delaware, Lackawanna & Western.**—Early on the morning of Dec. 7 a fire broke out in the repair shops of the Morris & Essex Division at Kingsland, N. J., and in spite of all the efforts made the machine shop, a two-story building 260 by 80 ft., was destroyed, except part of the walls. The tools were all damaged, but the extent of the damage cannot be ascertained until the wreck is all cleared away. The loss is estimated at from \$60,000 to \$75,000. The cause of the fire is unknown.

**Denver & Rio Grande.**—This company makes the following statement for November and the eleven months ending Nov. 30:

	November.	Eleven months.
Earnings.....	\$521,365	\$5,981,700
Expenses.....	260,083	3,472,281
Net earnings.....	\$260,082	\$2,509,419
Taxes and insurance.....	\$218,070	
Sinking fund.....	37,977	
Interest on equipment trust.....	246,273	
bonds.....	1,349,296	
		1,751,016
Surplus for eleven months.....		\$757,863

This surplus is equivalent to about 2½ per cent. on the stock. For the eleven months the increase in gross earnings was \$418,364, or 7.5 per cent.; in net earnings, \$164,377, or 7 per cent.

**Humboldt Bay & Eel River.**—This company has been organized to build a railroad from Humboldt Bay, Cal., to Watt Slough and thence up Eel River. The road will be 25 miles long, and will be used chiefly for hauling lumber. The headquarters of the company are San Francisco.

**Illinois Central.**—This company's statement for November shows the earnings from its lines as follows:

	1882.	1881.	Increase.	P. C.
In Illinois.....	\$579,419	\$572,540	\$6,879	1.2
In Iowa.....	172,725	164,078	8,647	4.9
Total.....	\$752,144	\$737,218	\$14,926	2.0

During November, 1882, the land sales were 2,018.10 acres for \$11,774.69, and the cash collected on land contracts was \$19,656.15.

**Indiana Pacific.**—This company has filed articles of incorporation to build a railroad from Auburn, Ind., through DeKalb, Noble, Kosciusko, Marshall and Stark counties to Judson, about 90 miles. The capital stock is \$3,000,000.

**Lehigh & Hudson River.**—The first regular coal train over this road left Belvidere, N. J., for Greycourt, on Dec. 11. The coal traffic has heretofore been entirely local.

**Little Rock & Fort Smith.**—This company reports earnings for November as follows:

Gross earnings.....	\$90,346
Expenses.....	31,344
Net earnings.....	\$59,000

The net earnings show an increase of \$25,619, or 77.6 per cent. The receipts from land sales for the month were \$24,828, an increase of 70 per cent. over November of last year. During November the trustees bought and canceled \$34,000 first-mortgage bonds, making \$104,000 canceled by them since Jan. 1 from the proceeds of land sales.

**Manhattan Elevated.**—The following statement is published for the month of November:

	Metropolitan.	N. Y. Elevated.	Total.
Net earnings.....	\$68,659	\$152,285	\$220,944
Fixed charges.....	66,606	50,000	116,606
Surplus.....	\$1,993	\$102,285	\$104,278

In this statement no allowance is made for taxes.

**Markesan & Brandon.**—This road is now completed from Brandon, Wis., on the Chicago, Milwaukee & St. Paul, west seven miles to some large granite quarries. It is graded five miles further, to the town of Markesan.

**Marquette, Houghton & Ontonagon.**—The Marquette Mining Journal says: "We learn that the contract for constructing the first 10 miles of this company's extension from L'Anse to Houghton has been awarded to Mr. Thos. McKeown, late General Superintendent of the Detroit, Mackinac & Marquette road, and that he will at once enter upon the preliminary work. A force of about 100 men will be employed during the winter in cutting out the right of way, and bringing the line to grade in places where there are heavy excavations to be made. Thus the heaviest of the work will be done by spring, when a large force will be employed and the extension rushed forward as rapidly as possible. It is the intention of the railroad company to have the entire 30 miles of road between L'Anse and Houghton finished, and the line open for business through to the latter point, by Sept. 1 next."

**Middletown Valley.**—A considerable amount of stock has been subscribed to this road, which is to run through the Middletown Valley from Rocky Ridge, Md., on the Western Maryland road, southwest to Knoxville on the Baltimore & Ohio, about 80 miles.

**New York & Long Branch.**—A Philadelphia dispatch of Dec. 13 says: "It is denied that the Pennsylvania Railroad office that any serious trouble has arisen between that company and the Central Railroad of New Jersey over a settlement under the contract between the two corporations for business transacted on the road between Point Pleasant and Long Branch, which is used jointly by the Pennsylvania and the New Jersey Central lines. There has been some difference of opinion in the interpretation of the contract between the two companies, and for that reason no settlement of last season's business has yet been made. An accounting officer of the Pennsylvania Railroad Company visited New York yesterday and had a consultation with the officials of the New Jersey Central on the subject."

**Old Colony.**—The great iron steamboat "Pilgrim," built for the Old Colony Steamboat Company, is approaching completion, and will be put on the line next season. She will be the largest boat on Long Island Sound. The company

is also building a new side-wheel freight boat 274 ft. long, having a beam engine with cylinders 68 in. diameter and 12 ft. stroke. This boat will carry about 80 car-loads of freight.

**Pennsylvania, Slatington & New England.**—It is reported that Mr. John I. Blair has taken a controlling interest in this road, and that he will assist in its completion. It is said also that he will consolidate it with the Bangor & Portland road, in which he is largely interested. The road is to run from Slatington, Pa., to Pine Island, N. Y., and a large part of the grading is done.

**Peoria & Farmington.**—It is said that the Central Iowa Company has secured a controlling interest in this road, which is now in operation from Peoria, Ill., to Abington, 33 miles, and is to run to the Mississippi at Keithsburg, where it will connect with the Central Iowa's Chicago, Burlington & Pacific line. The completion of these lines will give the Central Iowa an eastern outlet, and a line to the important city of Peoria.

**Philadelphia & Reading.**—At a meeting held in Philadelphia, Dec. 11, the board of managers approved the traffic contract with the Pittsburgh, McKeesport & Youghiogheny, the Pittsburgh & Erie, the Lake Shore & Michigan Southern, and the South Pennsylvania Railroad companies, which is referred to more particularly elsewhere.

In reply to the statement that coupons of the new consolidated 5 per cent. bonds have been paid, and thus given preference over the interest on the general mortgage loan, the Assistant Treasurer of the company says that the interest on the new loan is being paid, but that it is not given priority, and that the coupons on the general mortgage loan are also being paid. There is no intention on the part of the company to pay the coupons on the new loan when the interest on the general mortgage bonds are in default. The Receivers, however (except Mr. Gowen) do not recognize the new issue of consolidated 5 per cent. bonds, and say that the payment of interest on them is purely a corporate act of the company and without any sanction from them.

His co-receivers, Messrs. Caldwell and Lewis, having thus declined to recognize the new bonds sold by Mr. Gowen in England, that gentleman has addressed them an open letter, in which he says:

"First—The issue of 5 per cent. consolidated bonds was made publicly in July last under a prospectus issued and extensively published in London and this country.

"Second—The coupons thereon were due and paid after Nov. 1 last at the banking house of Glyn, Mills, Currie & Co.

"Third—There is no default upon the interest of any obligations prior in lien to the 5 per cent. consolidated mortgage bonds, the July coupon of the general mortgage bonds having been paid at maturity, and the December coupon of the income mortgage bonds being also paid.

"Fourth—The net earnings of the company for the year ending Nov. 30, 1882, are fully \$3,500,000 in excess of the amount required to pay the interest on the general mortgage bonds.

"Fifth—The earnings for the last year are \$850,000 in excess of all interest charges of every kind, and the only reason why the interest on the securities later in charge than the 5 per cent. consolidated bonds remains unpaid is that the Receivers have no means of raising new capital, and not being permitted by the Court to make a car trust, have been obliged during the receivership to apply nearly \$4,500,000 of net income to the purchase and construction of rolling stock and other new improvements, all of which could have been supplied from other sources but for the receivership, and all of which money can be restored to income account upon the termination of the receivership."

It would seem, from Mr. Gowen's own statement, that there is a necessity for putting more debt upon this already terribly overloaded company; that is, that if the interest obligations were all paid, it would be necessary to raise money from a car trust or "other sources" in order to meet its pressing necessities.

**Pittsburgh & Western.**—The third rail on this road is now laid to New Castle Junction, and the company has begun to run standard-gauge trains. The narrow-gauge rail will probably be taken up west of Callery Junction, but the Parker line will remain of 3 ft. gauge.

**Richmond & Allegheny.**—At the annual meeting in Richmond, Va., Dec. 12, the directors were authorized to place mortgages on the extension of the road beyond Williamsport to an amount not exceeding \$20,000 per mile first mortgage, and \$16,000 per mile second mortgage; also to have the line surveyed and located to the West Virginia state line.

**Rochester & Pittsburgh.**—Track is now laid from Bradford, Pa., south five miles to Howard's Crossing, where connection is made with the New York, Lake Erie & Western road, the track of that road being used thence to Johnsonburg. From Johnsonburg south track is laid for 15 miles, and the work is progressing well.

**St. Louis & Cairo.**—This company announces a heavy reduction in its passenger rates, beginning Nov. 9. It is believed that this will result in a large increase in passenger travel, although it may be followed by a reduction on competing lines.

**St. Paul, Minneapolis & Manitoba.**—Under the recent contract with the Northern Pacific Company, this company on Dec. 9 took possession of the Casselton Branch of the Northern Pacific, running from Casselton, Dak., north to Mayville, 43 miles. To connect the new acquisition with its own line, the Manitoba Company has built a spur three miles long from Everest, on the Breckenridge Extension, to Casselton.

Arrangements are being made for a new loop or second line from Minneapolis to Lake Minnetonka. The branch will be as near an air line as possible, and will be extended beyond Minnetonka to the Upper Lake. It is to be ready for next summer's travel.

**St. Regis Falls.**—Work has been begun on this road, which is to run from Moira, N. Y., on the Ogdensburg & Lake Champlain road, to St. Regis Falls, 11 miles. It will be a lumber road chiefly, and will be extended farther into the forest as business requires.

**South Pennsylvania.**—A contract has been concluded between this company, the Philadelphia & Reading, the Pittsburgh, McKeesport & Youghiogheny, the Pittsburgh & Lake Erie and the Lake Shore & Michigan Southern, by which those companies guarantee their connection with this proposed road when completed and also a reservation of a certain proportion of their earnings on business interchanged, for the purpose of securing the interest on the bonds of the new road. The South Pennsylvania Company proposes raising money to build its road by an issue of \$20,000,000 bonds with this traffic guarantee. The road is to run from Harrisburg west to a connection with the Pittsburgh, McKeesport & Youghiogheny, on a line generally some distance south of the Pennsylvania Railroad.

**Toledo, Cincinnati & St. Louis.**—The following circular (which reads as if the company was in a pretty bad way) was issued Dec. 7 to the stockholders of the so-called

Toledo & Delphos Trust who had not then paid up the 25 per cent. assessment levied on them by the committee:

"We beg to call your attention to the following facts, and to say that with this circular we leave the responsibility with you. We called for an additional payment of 15 per cent., payable Nov. 15, and while we regretted the necessity, there was no other course except to abandon the enterprise. Of the amount called for, payable Nov. 15, viz., \$225,000, every dollar was needed to keep the work going. Of this, about \$125,000 has been paid, leaving \$100,000 still due. We have stretched the use of the \$125,000, so that, if possible, the road might be held together and work go on until the money required to secure the services of Mr. E. B. Phillips could be secured. The committee appointed at the Parker House meeting believe they will secure the money, but it will take all the present month to reach all of the bondholders, and it is utterly impossible to keep the work going until that time unless you and others now make prompt payment. A telegram from the Wellston end, received last night, says that work stops there to-day for the want of iron to lay the remaining five miles, the rolling mill refusing to make further shipments unless cash is paid for the iron required. At the St. Louis end, work has already been seriously delayed for want of money, and workmen are actually suffering for want of pay, and the engineer reports that they are now threatening violence to the bridges. "We are helpless. You can protect your property. Will you act at once, or shall the reaching of St. Louis and Iron-ton this winter be abandoned?"

**Union Pacific.**—With reference to the earnings of this road as reported monthly the *Commercial and Financial Chronicle* of Dec. 9 says: "As to the figures of Union Pacific, an explanation in reference to the change that has taken place in them will be necessary. Our figures are always official, and yet a month ago they showed an increase for the current year of over \$2,100,000, while now, with \$97,000 to be added on for the gain in November, the total increase is given at only \$500,000. The reason for this is that shortly after our last statement came out the company issued a report of its receipts and expenses for the first nine months of the year, from which it appears that instead of a gain in gross earnings of \$2,138,203, as shown by the aggregates of the monthly estimated figures, there was actually a gain of only \$422,800, a difference of over \$1,700,000! Inquiry at the company's office in this city, whence all the figures came, elicited the astounding reply that these two irreconcilable statements were both correct, that the one gave merely approximate figures, while the other gave actual figures, but that as the latter were final they of course superseded the others, and those should now be disregarded. The actual earnings for the first nine months are accordingly incorporated in our figures for the current year to Dec. 1. The crowded condition of our columns this week does not permit us to dwell upon this most remarkable discrepancy, but we will say that if all the company's preliminary figures are as reliable as those for the nine months appear to have been, then they are as worthless as they are misleading."

The explanation given by the company is that in issuing the monthly reports comparisons were made with the estimated earnings for last year, as published from month to month, and that the last year's actual earnings considerably exceeded the estimates. But it would certainly have been much better and quite as easy to make comparisons with the actual earnings of last year, as most companies do, following what is certainly the right plan.

The following official statement of the floating debt is published: "The exact statement of the floating debt of the company on Dec. 4, 1882, was as follows:

Notes payable.....	\$3,044,063.75
Omaha drafts.....	1,004,753.58
Dividends unpaid.....	68,504.39
Coupons.....	279,550.06
Sundry accounts.....	1,003,649.63
Total.....	\$5,490,581.41
Deduct assets:	
Cash, Boston.....	\$83,913.41
Cash, New York.....	95,000.00
Sundry accounts.....	125,445.53
Notes receivable.....	111,300.00
	315,657.94

Balance.....	\$5,174,923.47
Company's securities on hand, listed:	
Consolidated bonds, market value	\$2,312,000.00
89½.....	
Utah Southern Extension bonds,	
market value 101.....	975,000.00
Sinking-fund bonds, market value	
117.....	1,026,000.00
	4,313,000.00

Net balance of liabilities..... \$1,361,923.47

"To meet the above the company has on hand in the treasury, not hypothecated under the collateral trust indenture or the Kansas Pacific consolidated mortgage securities of branch roads owned, controlled or operated by this company, as follows: Railroad bonds, \$16,516,280.40; railroad stocks, \$28,743,200."

**Valley of Ohio.**—This road is now completed to Wheeling Junction, O., where connection is made with the Wheeling & Lake Erie road. The new terminus is 17 miles beyond the old terminus at Canton, and 75 miles from Cleveland. Regular trains now run through in connection with the Wheeling & Lake Erie road.

**Western North Carolina.**—Work is now progressing well in the Cowee tunnel on the Ducktown line, in spite of many obstacles. The grading will be finished to Charleston in Swain County, N. C., by spring, and tracklaying will then be resumed at Pigeon River.

**Western Union Telegraph.**—The following statement is made for the quarter ending Dec. 30, the December earnings estimated:

Balance, Oct. 1.....	\$2,607,097
Net earnings for quarter.....	2,150,000
Total.....	\$4,817,097
Interest and sinking funds.....	126,850
Balance.....	\$4,690,247

On this showing it was resolved to declare the usual quarterly dividend of 1½ per cent., which will require \$1,199,800, leaving a balance of \$3,490,447 at the close of the quarter.

**Wisconsin Central.**—The last rail on this company's Milwaukee Extension was laid Dec. 11, and the road will very soon be opened for traffic. It is 65 miles long, from Neenah, Wis., south through Oshkosh and Fond du Lac to Schleiserville, where it connects with the Chicago, Milwaukee & St. Paul. An agreement has been made under which trains will use that company's track for the remaining 30 miles to Milwaukee. From Neenah to Fond du Lac the line is close to the Chicago & Northwestern, and it is nowhere very far from that company's line. The road has been built under an organization known as the Milwaukee & Lake Winnebago Company, which is controlled by the Wisconsin Central. The entire line has been built this season, the work having been very rapidly done.